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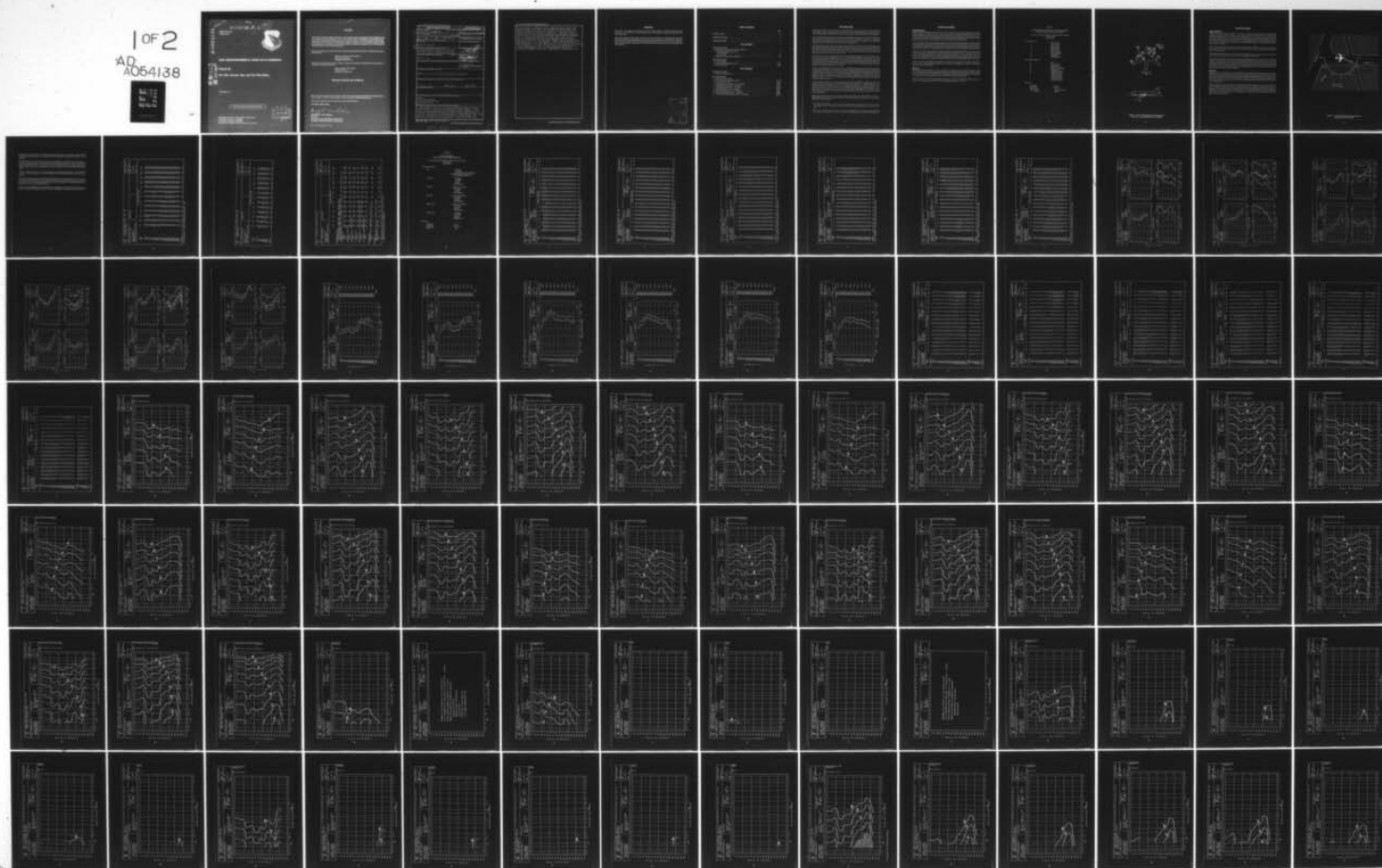
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AMRL-TR-75-50  
Volume 83



# USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 83

KC-135A Aircraft, Near and Far-Field Noise

DECEMBER 1977

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AEROSPACE MEDICAL RESEARCH LABORATORY  
AEROSPACE MEDICAL DIVISION  
AIR FORCE SYSTEMS COMMAND  
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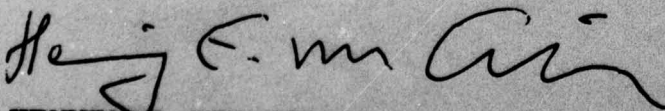
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**FOR THE COMMANDER**



**HENNING E. VON GIERKE**

Director

Biodynamics and Bioengineering Division  
Aerospace Medical Research Laboratory

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pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.



## PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author gratefully acknowledges Mr. John Cole for his assistance in preparing this report, Mr. Robert Lee and Mr. Jerry Speakman for their assistance in acquiring the raw data, Mr. Henry Mohlman, Mr. Keith Kettler and Mr. David Eilerman of the University of Dayton for assistance in the mechanics of data processing and Mrs. Peggy Massie and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

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## INTRODUCTION

The USAF KC-135A is a long range high performance tanker aircraft powered by four J57-P-43W or 59W turbojet engines. The aircraft was manufactured by the Boeing Company and the engines by United Aircraft, Pratt and Whitney Division. The commercial version of the aircraft is the Boeing 707.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the KC-135A aircraft.

Near-field data presented in this volume were acquired from a KC-135A with a J57-43W engine and far-field data from a C-135A with a J57-59W engine. The 43 and 59 are the same engine except that some alloy metals were changed during manufacture making one of the engines heavier. However the noise from each is the same. Since the KC-135A is much more prevalent and comes equipped with either engine this volume will refer only to that model.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15 C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), to derive comparable data for other meteorological conditions. Refer to *Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975
2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975



## NEAR-FIELD NOISE

### MEASUREMENTS

AMRL acquired near-field noise data on the KC-135A aircraft during ground runup operations of its turbojet engines. For these tests, the aircraft was located on a concrete parking apron at Wright-Patterson AFB along with other similar aircraft. Table 1 gives the surface meteorological conditions and the engine power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all of the noise samples on magnetic tape. During analysis of each sample, he determined the root-mean square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location.

Figure 1 shows the eleven numbered near-field locations where ground crews are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations in the near-field are difficult since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test conditions A.

### RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the KC-135A aircraft at the eleven ground crew locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures given in Table 3 which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS  
FOR NEAR-FIELD NOISE MEASUREMENT

KC-135A Aircraft, Ground Runup, Wright-Patterson AFB, OH  
12 October 1977  
Tail # 553135

## Ground Crew Location

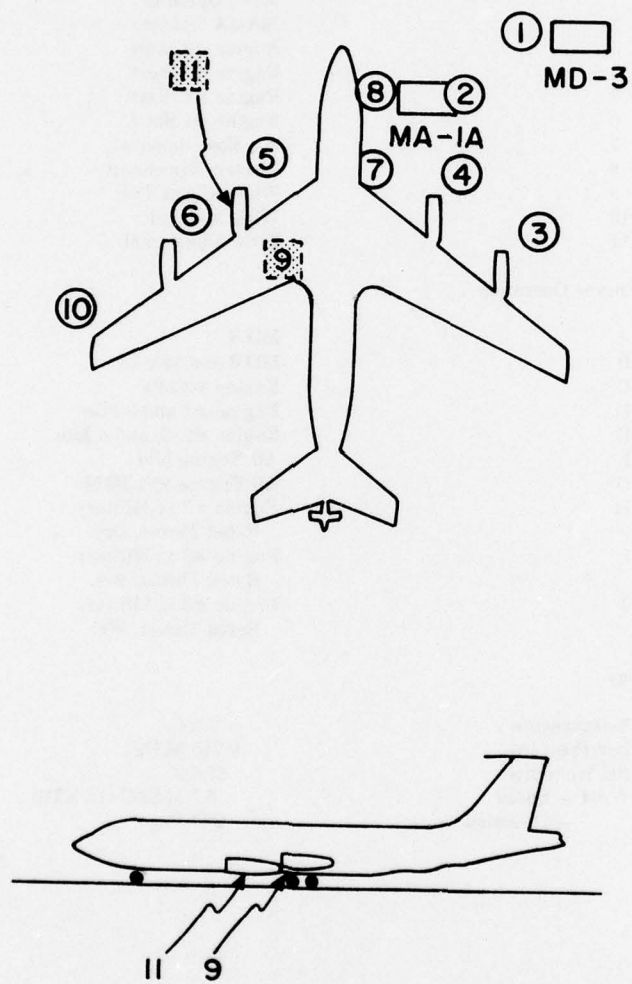
1	MD-3 Operator
2	MA-1A Operator
3	Engine #2 Start
4	Engine #3 Start
5	Engine #4 Start
6	Engine #1 Start
7	Air Hose Removal
8	Electric Disconnect
9	Wheel Chock Pull
10	Wing Marshal
11	Trim Adjustment

## Aircraft Engine Operation

A	MD-3
B	MD-3 and MA-1A
C	Engine #2 Idle
D	Engine #2 and 3 Idle
E	Engine #2, 3, and 4 Idle
F	All Engine Idle
G	All Engine 85% RPM
H	Engine #2 at Military Rated Thrust, Dry
I	Engine #2 at Military Rated Thrust, Set
J	Engine #2 at Military Rated Thrust, Wet

## Meteorology

Temperature	7.2 C
Bar Pressure	0.745 M Hg
Rel Humidity	57.5 %
Wind — Speed	6.7 M/SEC (13 KTS)
— Direction	280 Deg



**Figure 1. Near-Field Measurement Locations on  
Taxiway 21 at Wright-Patterson AFB OH**



## FAR-FIELD NOISE

### MEASUREMENTS

AMRL acquired far-field data during a one hour test period, thus keeping similar meteorological conditions throughout the test. Figure 2 shows the ground runup pad, ground cover (short grass), aircraft orientation and the 19 microphone measurement sites on a semicircle. The center of the 75 meter radius semicircle used in surveying the J57-P 59W engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through the inboard engines' exhaust-nozzle exits. The ground runup area did not have a blast deflector; therefore, the engines' exhausts were in a "free-flow" condition.

Table 4 provides cockpit readouts of some engine characteristics (% RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

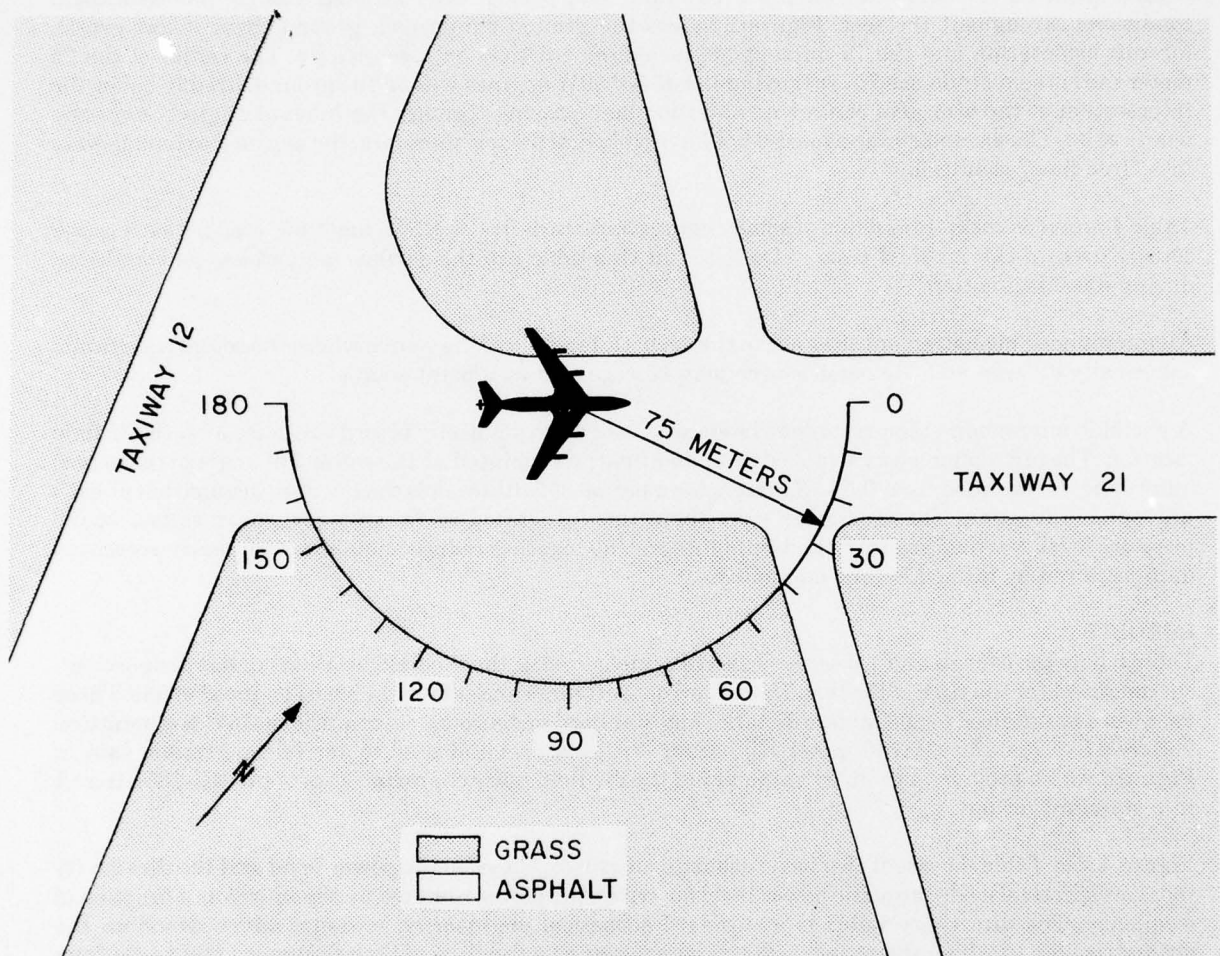
All microphone measurement sites are in the acoustic far-field of the source where the sound wavefronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand-held pole, pointed at the source (0° angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

### RESULTS

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15 C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the KC-135 aircraft in a standard format.

Figure 4 and Table 6 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure which describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.



**Figure 2. Far-Field Measurement Locations at  
Wright-Patterson AFB OH**

Estimates of noise characteristics for intermediate power settings (e.g., 88% engine) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 5 through 11 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

No data are presented at the 170 and 180 degree locations because of turbulent air flow behind the aircraft. Typical A-weighted levels for these angles are 10 to 20 dBA below those at the 160 degree location.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low (e.g., Table 5 at idle power).

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)											
1/3 OCTAVE BAND											
IDENTIFICATION:											
2											
NOISE SOURCE/SUBJECT: ( OPERATION: )											
KC-135A AIRCRAFT ( )											
GROUND CREW ( )											
NEAR FIELD NOISE LEVELS ( )											
LOCATION/CONDITION											
FREQ (HZ)	1/A	2/B	3/E	4/D	5/C	6/F	7/F	8/F	9/F	10/G	11/H
25	70	83	104	93	86	86	86	84	99	109	112
31.5	68	82	101	93	83	87	89	87	98	107	111
40	77	84	103	92	88	91	93	87	96	109	112
50	82	86	100	94	88	89	94	94	97	108	111
63	86	89	99	93	90	91	94	92	97	108	115
80	83	88	97	93	89	91	91	90	96	108	117
100	101	97	97	96	90	92	100	101	96	110	120
125	106	102	98	99	91	93	102	105	97	112	123
160	97	99	97	97	91	92	99	96	98	114	125
200	97	95	95	95	91	92	95	92	102	117	130
250	103	98	97	98	95	95	96	96	100	117	130
315	100	98	96	99	98	98	97	93	99	117	132
400	92	98	101	100	99	100	100	97	101	118	129
500	93	92	101	101	103	101	98	95	102	119	135
630	92	94	101	101	103	100	98	98	103	118	132
800	93	89	104	104	106	103	100	100	103	118	132
1000	90	87	109	109	108	107	109	106	104	118	131
1250	88	89	110	109	113	113	108	108	108	117	129
1600	87	90	111	114	113	105	102	108	103	117	129
2000	86	93	111	113	109	107	105	107	102	117	128
2500	84	95	107	109	114	105	103	105	103	117	128
3150	83	97	110	112	109	105	106	106	106	115	125
4000	80	95	108	108	111	108	107	104	120	116	123
5000	79	94	104	104	108	101	99	99	105	114	121
6300	77	96	102	103	106	99	98	98	103	117	119
8000	74	106	100	102	104	98	99	98	107	121	117
10000	70	109	98	101	101	95	96	98	103	113	115
OVERALL	110	113	119	120	121	117	116	116	121	130	142
											140
											143

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)													
2													
NOISE SOURCE/SUBJECT: ( OPERATION: )													
KC-135A AIRCRAFT ( )													
GROUND CREW ( )													
NEAR FIELD NOISE LEVELS ( )													
LOCATION/CONDITION													
FREQ (HZ)	1/A	2/B	3/E	4/D	5/C	6/F	7/F	8/F	9/F	10/G	11/H	11/I	11/J
31.5	78	88	107	97	91	93	95	91	102	113	117	115	119
63	88	93	103	98	94	95	98	97	101	113	119	120	121
125	108	104	102	102	96	97	105	107	101	117	128	128	129
250	106	102	101	102	100	100	101	99	105	122	135	132	138
500	97	100	106	105	106	105	103	102	107	123	137	135	138
1000	96	93	113	113	115	114	112	110	110	122	135	134	137
2000	91	98	115	117	117	111	108	111	107	121	133	131	134
4000	85	100	113	114	114	110	110	109	120	120	128	126	130
8000	79	111	105	107	108	102	102	103	110	123	122	121	125
OVERALL	110	113	119	120	121	117	116	116	121	130	142	140	143

TABLE: MEASURES OF HUMAN NOISE EXPOSURE												
IDENTIFICATION:												
3												
NOISE SOURCE/SUBJECT:	OPERATION:				TEST 77-001-001							
KC-135A AIRCRAFT	(											OMEGA 3.2
GROUND CREW	(											RUN 01
NEAR FIELD NOISE LEVELS	(											18 OCT 77
	(											PAGE H1
LOCATION/CONDITION												
1/A	2/B	3/E	4/D	5/C	6/F	7/F	8/F	9/F	10/G	11/H	11/I	11/J
HAZARD/PROTECTION												
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR												
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR												
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)												
NO PROTECTION												
OASLC	110	111	119	120	120	117	116	116	120	129	142	140
OASLA	102	110	119	121	122	118	116	116	122	129	140	138
T	21	5	P	P	P	P	P	P	P	P	P	P
MINIMUM QPL EAR MUFFS												
OASLA*	88	89	91	92	93	89	89	90	93	105	117	115
T	240	202	143	120	101	202	202	170	101	13	P	2.2
AMERICAN OPTICAL 1700 EAR MUFFS												
OASLA*	83	85	86	86	87	83	84	84	87	100	112	109
T	571	404	339	339	285	571	480	480	285	30	3.8	6
V-51R EAR PLUGS												
OASLA*	80	82	91	92	93	90	89	88	93	102	116	113
T	960	679	143	120	101	170	202	240	101	21	P	3.2
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS												
OASLA*	66	72	78	79	80	78	76	75	76	89	101	99
T	960	960	960	960	960	960	960	960	960	202	25	36
H-133 GROUND COMMUNICATION UNIT												
OASLA*	77	82	92	94	95	90	69	89	91	101	112	110
T	960	679	120	85	71	170	202	202	143	25	3.8	5
COMMUNICATION												
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)												
PSIL	94	97	111	112	113	110	108	108	108	122	135	133
ANNOUNCE												
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PND3)												
TONE CORRECTION (C IN DB)												
PNLT	117	125	133	135	136	132	131	130	142	143	153	151
C	1	1	1	1	2	2	2	1	5	1	1	1

\* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.  
P ADDITIONAL EAR PROTECTION REQUIRED.



TABLE 4  
TEST CONDITIONS  
FOR FAR-FIELD NOISE MEASUREMENTS

C-135A Aircraft, Ground Runups, Wright-Patterson AFB, OH  
25 July 1974  
Tail # 600377

Aircraft Engine Operation

Idle	All Engines 63 % RPM 280 C EGT (Exhaust Gas Temperature) No Register EPR (Engine Pressure Ratio) 1100 LBS/HR FF (Fuel Flow)
80% RPM	All Engines 80 % RPM 310 C EGT 1.25 EPR 2250 LBS/HR FF
90% RPM	Engine No. 3, Others Idle 90 % RPM 440 C EGT 1.74 EPR 5000 LBS/HR FF
90% RPM	Engine No. 2, Others Idle 90 % RPM 440 C EGT 1.95 EPR 5800 LBS/HR FF
Military Power	Engine No. 3, Others Idle 96 % RPM 590 C EGT 2.34 EPR 8200 LBS/HR FF
Military Power	All Engines 95 % RPM 580 C EGT 2.34 EPR 8000 LBS/HR FF

Meteorology

Temperature	26 C
Bar Pressure	0.741 M Hg
Rel Humidity	45 %
Wind	Calm

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)		IDENTIFICATION:																	
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( ) OPERATION:																			
( ) IDLE																			
( ) 63% RPM																			
( ) ALL ENGINES																			
( ) FREE FLOW																			
C-135A AIRCRAFT																			
J57-P-59W ENGINE																			
FAR FIELD NOISE																			
FREQ (HZ)		ANGLE (DEGREES)																	
		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170 180
25		65<	66<	66<	64<	64<	67<	65<	65<	65<	68<	68<	71<	70<	70<	72<	71<	73<	
31.5		66<	66<	63<	64<	64<	67<	65<	65<	66<	66<	68<	70<	71<	74<	73<	74<	74<	
40		68<	65<	67<	67<	67<	68<	65<	65<	67<	67<	68<	67<	71<	74<	75<	74<	75<	
50		70<	69<	70<	69<	68<	69<	68<	66<	66<	67<	69<	70<	72<	71<	75<	74<	74<	
63		69<	69<	69<	69<	66<	66<	66<	66<	66<	67<	68<	69<	71<	74<	75<	73<	75<	
80		69<	68<	70<	68<	65<	65<	67<	67<	67<	68<	70<	72<	74<	75<	76<	74<	75<	
100		72<	74<	74<	74<	72<	70<	72<	73<	74<	75<	76<	75<	78<	77<	78<	77<	76<	
125		71<	73<	72<	70<	68<	68<	69<	70<	70<	71<	73<	74<	75<	75<	76<	75<	74<	
160		74<	74<	75<	72<	69<	68<	69<	70<	69<	70<	72<	74<	75<	76<	76<	76<	74<	
200		71<	73<	72<	70<	67<	67<	67<	67<	66<	67<	69<	71<	73<	72<	72<	73<	72<	
250		72<	73<	73<	71<	68<	67<	66<	67<	69<	69<	69<	71<	74<	73<	73<	72<	70<	
315		76<	76<	78<	75<	72<	71<	69<	70<	69<	69<	69<	71<	74<	73<	73<	72<	70<	
400		77<	78<	78<	77<	73<	71<	70<	70<	70<	72<	70<	72<	74<	72<	74<	71<	71<	
500		80<	80<	80<	78<	74<	71<	70<	71<	71<	72<	72<	74<	76<	73<	73<	70<	70<	
630		81<	81<	81<	80<	76<	73<	72<	74<	73<	73<	74<	77<	76<	73<	72<	71<	69<	
800		84<	83<	84<	83<	79<	76<	73<	74<	73<	72<	74<	77<	76<	71<	71<	70<	67<	
1000		88<	87<	87<	88<	85<	81<	85<	87<	83<	82<	82<	80<	79<	75<	78<	74<	72<	
1250		94<	93<	93<	92<	88<	82<	85<	85<	82<	81<	82<	83<	83<	80<	82<	81<	81<	
1600		88<	88<	89<	90<	87<	80<	79<	77<	76<	76<	78<	81<	81<	76<	74<	71<	69<	
2000		91<	92<	90<	92<	90<	82<	84<	84<	84<	81<	78<	80<	79<	75<	72<	69<	67<	
2500		90<	88<	86<	87<	84<	76<	78<	79<	78<	75<	75<	77<	77<	72<	69<	67<	64<	
3150		89<	88<	90<	90<	88<	82<	85<	86<	86<	86<	88<	90<	89<	84<	80<	77<	73<	
4000		85<	87<	89<	87<	84<	75<	78<	81<	82<	85<	88<	89<	89<	85<	82<	80<	78<	
5000		83<	84<	84<	83<	80<	71<	72<	74<	73<	71<	76<	79<	79<	75<	70<	67<	65<	
6300		80<	81<	81<	80<	77<	69<	71<	73<	73<	73<	78<	81<	81<	76<	71<	67<	64<	
8000		76<	77<	77<	76<	74<	65<	69<	70<	71<	74<	78<	81<	81<	76<	72<	68<	65<	
10000		70<	71<	71<	71<	68<	59<	63<	64<	65<	67<	73<	77<	76<	71<	67<	63<	59<	
OVERALL		99	99	99	99	96	90	92	92	91	91	93	95	95	91	90	88	87	

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																
1/3 OCTAVE BAND																
DISTANCE = 75 METERS																
NOISE SOURCE/SUBJECT:																
( OPERATION: )																
( C-135A AIRCRAFT )																
( J57-P-59W ENGINE )																
( FAR FIELD NOISE )																
METEOROLOGY:																
TEMP = 26 C																
BAR PRESS = .741 M HG																
REL HUMID = 45 %																
PAGE 2																
IDENTIFICATION:																
OMEGA 1.4																
TEST 75-002-023																
RUN 02																
06 MAY 75																
FREQ (HZ)																
ANGLE (DEGREES)																
108 107 106 105 104 103 102 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0																
25	74	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
31.5	73	74	72	71	71	71	71	71	71	71	71	71	71	71	71	71
40	77	76	75	75	75	75	75	75	75	75	75	75	75	75	75	75
50	76	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
63	78	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
80	80	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
100	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
125	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
160	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
200	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
250	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
315	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
400	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
500	85	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
630	89	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
800	88	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
1000	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
1250	99	97	94	94	94	94	94	94	94	94	94	94	94	94	94	94
1600	101	100	97	99	97	97	97	97	97	97	97	97	97	97	97	97
2000	99	99	99	103	98	98	98	98	98	98	98	98	98	98	98	98
2500	96	96	96	97	95	95	95	95	95	95	95	95	95	95	95	95
3150	98	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
4000	101	101	101	102	101	101	101	101	101	101	101	101	101	101	101	101
5000	96	96	96	97	95	95	95	95	95	95	95	95	95	95	95	95
6300	94	95	95	95	94	92	91	92	92	92	92	92	92	92	92	92
8000	92	93	92	93	92	92	90	89	88	85	86	86	86	86	86	86
10000	87	88	87	88	87	84	83	82	81	82	82	82	82	82	82	82
OVERALL	108	107	107	106	106	104	104	104	103	101	101	101	105	104	102	103
< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																



[illegible]

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																	IDENTIFICATION:		
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( OPERATION: )																			
C-135A AIRCRAFT																			
( 90% RPM, NO. 2 ENGINE )																			
( OTHER ENGINES IDLE )																			
( FREE FLOW )																			
METEOROLOGY:																			
TEMP = 26 C																			
BAR PRESS = .741 M HG																			
REL HUMID = 45 %																			
PAGE 2																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	77	77	74	76	74	75	74	76	79	78	74	78	81	85	90	93	93		
31.5	80	76	77	77	75	78	78	77	81	81	77	81	81	84	92	93	97		
40	82	79	78	81	79	79	79	80	81	83	80	87	88	87	92	96	98		
50	80	78	78	80	78	77	79	79	80	82	77	86	87	91	93	96	98		
63	83	81	81	83	80	80	80	80	83	82	78	86	89	92	96	98	100		
80	86	85	83	86	82	83	83	83	83	82	82	86	93	90	99	103	104		
100	88	87	85	86	84	84	85	86	88	87	84	90	96	94	102	109	107		
125	89	87	86	87	84	85	83	85	87	88	85	92	95	97	100	108	106		
160	89	88	89	90	86	87	87	85	86	88	87	93	96	97	102	109	106		
200	93	92	90	88	86	85	84	83	83	83	84	92	94	95	99	108	108		
250	94	93	92	90	85	84	84	80	81	84	85	92	92	92	96	106	108		
315	91	91	89	90	85	84	85	81	81	85	86	94	95	96	99	103	106		
400	92	91	89	90	85	85	86	82	81	85	87	93	94	92	97	105	104		
500	92	91	89	90	85	83	85	82	82	87	87	94	94	92	97	105	104		
630	91	91	89	89	83	83	86	82	83	87	86	94	94	91	95	104	102		
800	91	90	89	89	83	83	85	81	81	86	86	92	92	89	93	102	100		
1000	93	92	92	92	85	86	91	86	85	89	87	90	91	88	91	100	99		
1250	98	95	92	91	87	89	90	85	83	87	85	90	90	87	91	99	98		
1600	92	93	92	91	88	88	85	80	81	86	85	89	90	86	90	99	98		
2000	93	95	94	95	89	89	87	84	85	87	84	88	89	85	89	97	97		
2500	98	100	99	99	86	88	86	82	82	85	83	86	86	83	87	94	94		
3150	94	94	92	94	87	90	91	86	86	90	86	93	91	87	87	93	92		
4000	92	92	91	93	85	87	85	83	82	89	86	96	94	89	87	91	89		
5000	95	94	92	94	83	83	83	78	77	81	78	83	83	80	81	86	85		
6300	89	89	87	88	79	80	80	77	76	80	77	83	84	79	80	85	83		
8000	89	88	86	87	77	79	81	78	77	82	79	85	85	80	79	83	82		
10000	84	82	80	81	70	72	74	71	71	75	73	79	79	75	75	78	77		
OVERALL	106	106	105	105	98	99	100	97	97	100	98	105	106	105	110	117	116		
< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE																			

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

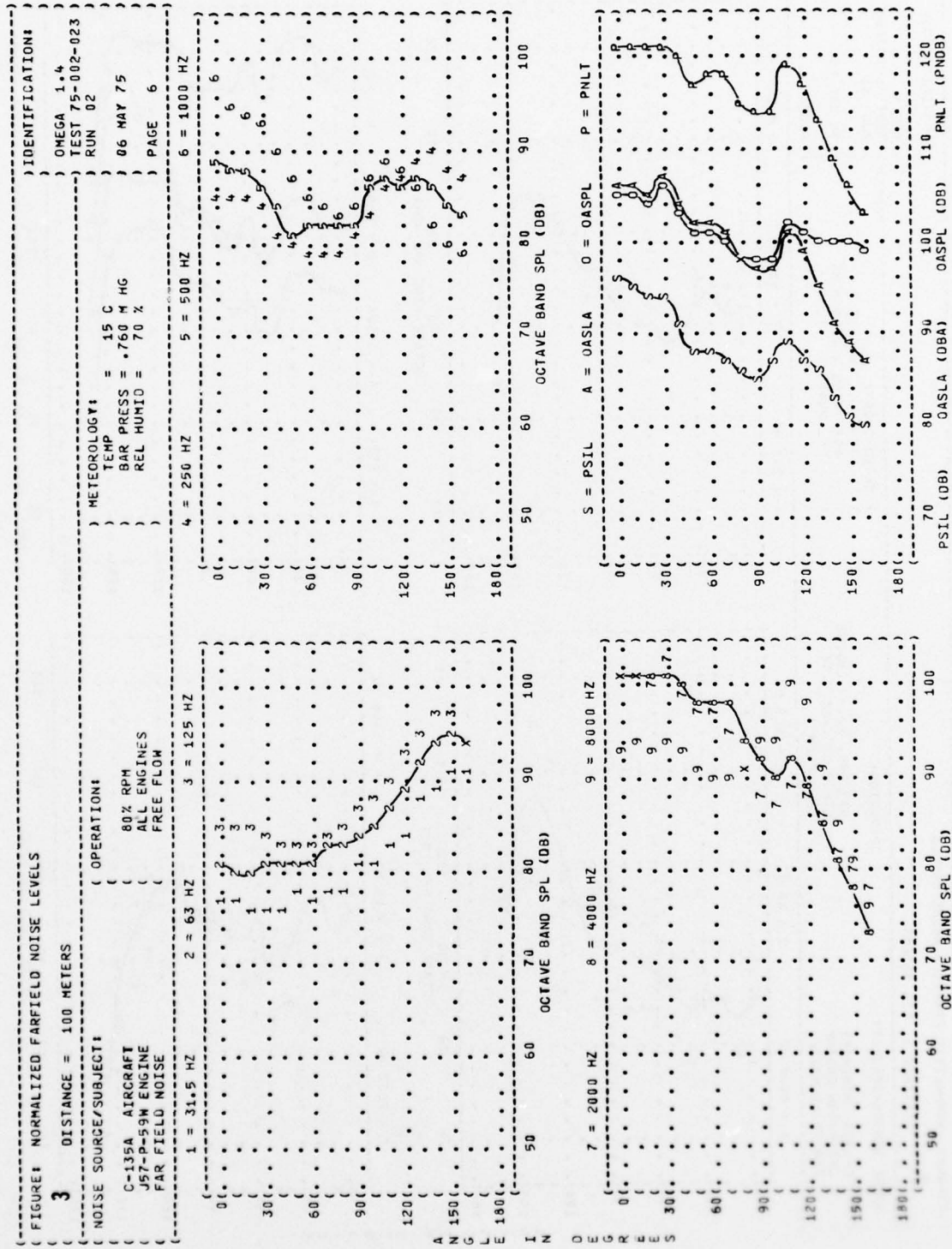
TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																
1/3 OCTAVE BAND																
DISTANCE = 75 METERS																
NOISE SOURCE/SUBJECT:																
C-135A AIRCRAFT																
J57-P-59W ENGINE																
FAR FIELD NOISE																
FREQ (HZ)																
ANGLE (DEGREES)																
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																
25	80	81	81	80	81	84	87	87	86	87	87	92	93	98	101	101
31.5	80	83	82	81	82	83	86	87	85	88	87	90	94	98	102	101
40	82	83	83	83	83	83	85	87	88	90	92	92	98	103	107	102
50	84	83	82	84	84	84	88	90	89	92	94	94	99	103	107	102
63	86	85	86	88	87	88	89	91	91	93	95	97	104	109	110	102
80	90	88	90	89	88	88	91	93	94	94	96	99	106	111	112	101
100	92	91	94	94	91	90	95	97	96	98	100	103	111	115	117	112
125	93	93	93	95	94	92	95	96	98	99	102	103	112	117	118	101
160	94	96	96	96	94	93	94	97	97	101	103	106	111	118	119	114
200	98	97	98	97	93	92	96	97	95	98	101	104	110	114	117	112
250	97	95	97	95	94	93	94	95	94	99	100	102	110	113	116	111
315	95	95	97	96	93	92	94	95	93	97	101	103	107	113	115	109
400	99	98	98	98	95	94	95	94	95	99	103	104	107	110	115	108
500	104	104	105	103	98	95	100	97	102	105	106	106	107	110	119	111
630	102	102	103	104	98	95	97	97	98	103	105	107	109	110	117	111
800	101	100	102	104	97	94	97	98	97	102	105	107	108	111	115	110
1000	99	100	103	95	92	97	98	97	98	102	105	108	108	110	113	108
1250	99	99	102	93	90	95	97	96	96	102	105	108	109	111	112	105
1600	98	99	99	102	92	91	95	97	95	103	106	110	110	110	111	105
2000	97	98	97	99	89	88	93	95	95	102	105	110	110	110	111	104
2500	100	99	99	102	91	90	95	96	94	101	104	108	108	108	108	102
3150	98	99	98	100	91	90	96	96	93	101	103	108	108	107	108	101
4000	95	95	95	96	86	85	91	93	91	100	102	107	108	106	107	100
5000	95	94	95	96	86	86	91	92	89	98	100	104	104	104	104	97
6300	92	91	92	93	84	83	89	89	87	97	99	103	103	103	103	97
8000	89	89	90	91	82	80	87	87	86	95	96	100	101	101	101	94
10000	84	84	85	86	78	76	83	84	82	92	93	97	98	97	98	91
OVERALL	111	111	112	113	107	105	108	109	109	114	116	119	122	125	128	123
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																



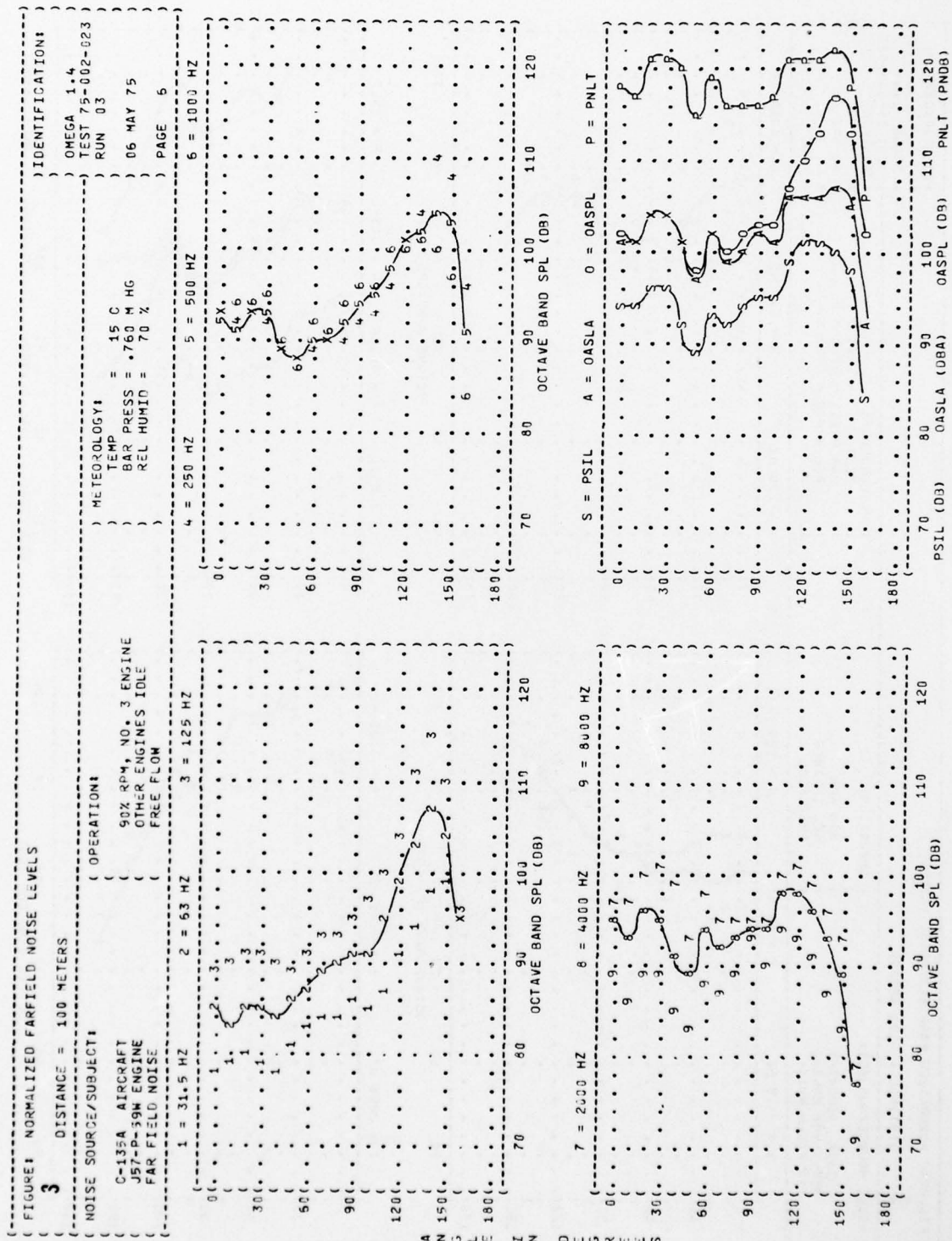
TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																		
1/3 OCTAVE BAND																		
DISTANCE = 75 METERS																		
NOISE SOURCE/SUBJECT:																		
( OPERATION: )																		
( MILITARY POWER )																		
( 96% RPM )																		
( ALL ENGINES )																		
( FREE FLOW )																		
C-135A AIRCRAFT																		
J57-P-59W ENGINE																		
FAR FIELD NOISE																		
FREQ (HZ)																		
ANGLE (DEGREES)																		
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																		
25	83	85	84	83	84	85	87	88	91	93	91	94	95	101	104	105	106	
31.5	85	84	86	85	86	87	89	89	92	93	92	95	96	103	106	106	106	
40	88	88	87	86	87	90	91	91	93	95	96	98	101	109	111	111	108	
50	88	89	87	88	87	90	91	93	95	95	98	101	103	108	112	112	107	
63	91	90	91	91	91	92	93	95	96	97	98	102	106	113	116	116	109	
80	94	94	94	93	93	93	94	95	97	98	101	103	110	116	118	117	110	
100	96	97	96	95	95	94	98	100	99	102	103	108	115	119	121	119	114	
125	97	98	97	96	95	95	97	98	99	103	105	108	116	121	120	120	113	
160	100	101	100	99	97	98	98	99	102	103	105	110	116	123	121	121	115	
200	103	104	101	100	97	97	98	98	99	102	104	108	113	120	120	120	115	
250	102	103	102	100	98	97	97	98	99	101	104	106	113	116	121	119	115	
315	102	102	102	100	98	98	98	98	100	99	104	106	113	118	120	119	114	
400	105	105	105	100	98	100	100	99	102	100	106	107	112	117	120	119	115	
500	115	117	113	110	103	102	101	100	104	104	109	110	114	119	123	121	115	
630	111	110	110	107	105	105	105	102	104	104	108	111	113	117	121	118	111	
800	108	108	108	106	104	106	107	105	105	104	109	111	113	116	118	116	108	
1000	106	107	107	105	103	106	107	106	106	105	108	111	114	116	117	114	105	
1250	105	104	106	104	101	105	106	104	106	106	109	112	114	116	116	112	102	
1600	104	103	105	104	100	105	106	104	106	106	110	112	114	117	115	112	102	
2000	101	101	103	101	96	102	104	104	105	106	110	112	114	116	115	111	102	
2500	106	104	108	106	102	106	105	103	105	104	109	111	112	114	113	109	99	
3150	105	103	107	104	100	105	105	103	104	104	109	111	112	114	112	109	98	
4000	100	99	101	99	95	100	102	101	103	102	107	110	112	113	112	108	97	
5000	100	99	102	99	96	100	101	98	101	100	105	108	109	110	108	106	95	
6300	97	97	99	96	93	98	99	97	100	99	104	107	108	110	108	105	94	
8000	95	94	97	94	91	96	97	95	98	97	102	105	106	108	106	103	93	
10000	90	90	93	90	86	91	93	91	94	94	100	101	103	105	104	101	89	
OVERALL	119	119	119	116	113	115	116	115	116	116	120	123	126	131	132	130	125	
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																		

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.









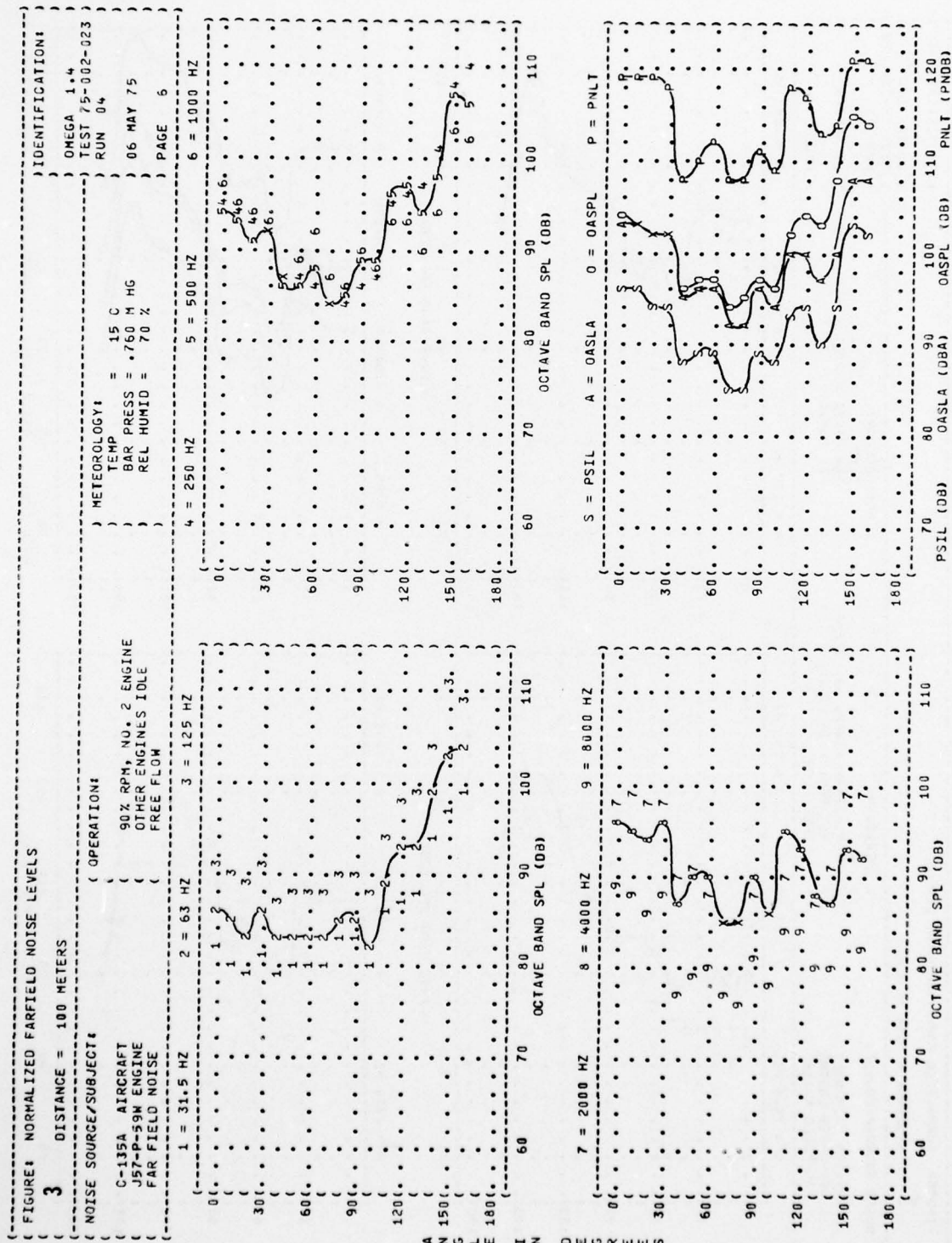


FIGURE 1 NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT: ( OPERATIONS )

C-135A AIRCRAFT ( MILITARY POWER, NO. 3 ENG )

J57-P-59M ENGINE ( 96% RPM, (OTHERS IDLE) )

FAR FIELD NOISE ( FREE FLOW )

METEOROLOGY: TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4

TEST 75-002-023 RUN 05

06 MAY 75

PAGE 6

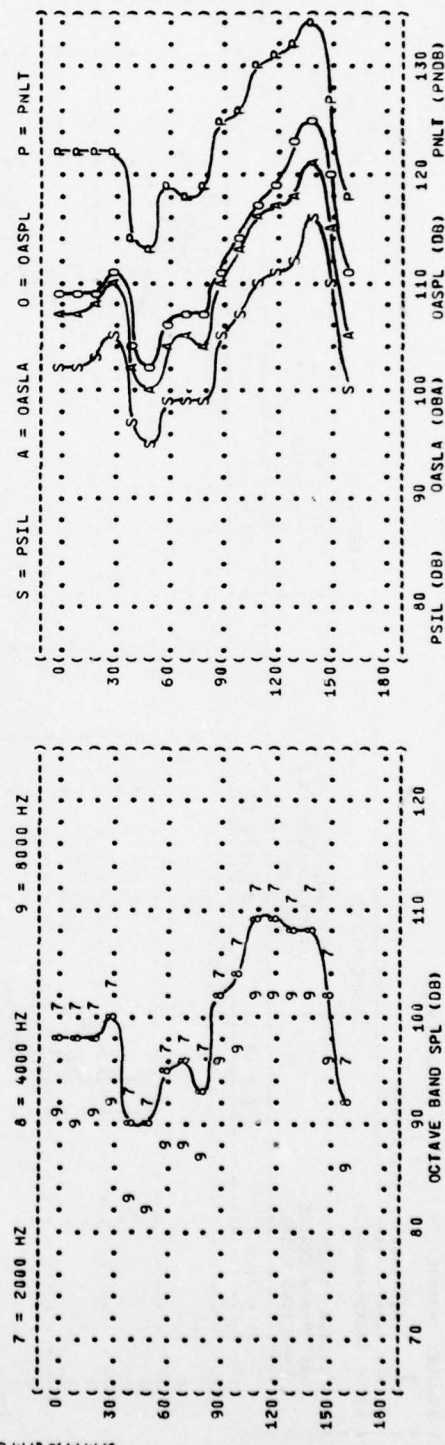
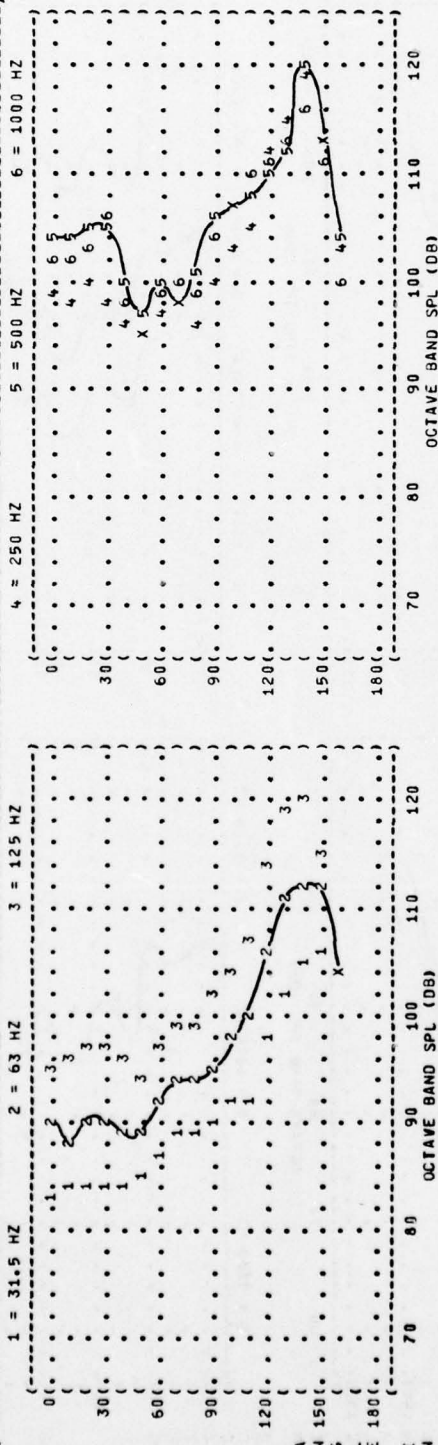






FIGURE 4: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-023

RUN 01

06 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

IDLE

63% RPM

ALL ENGINES

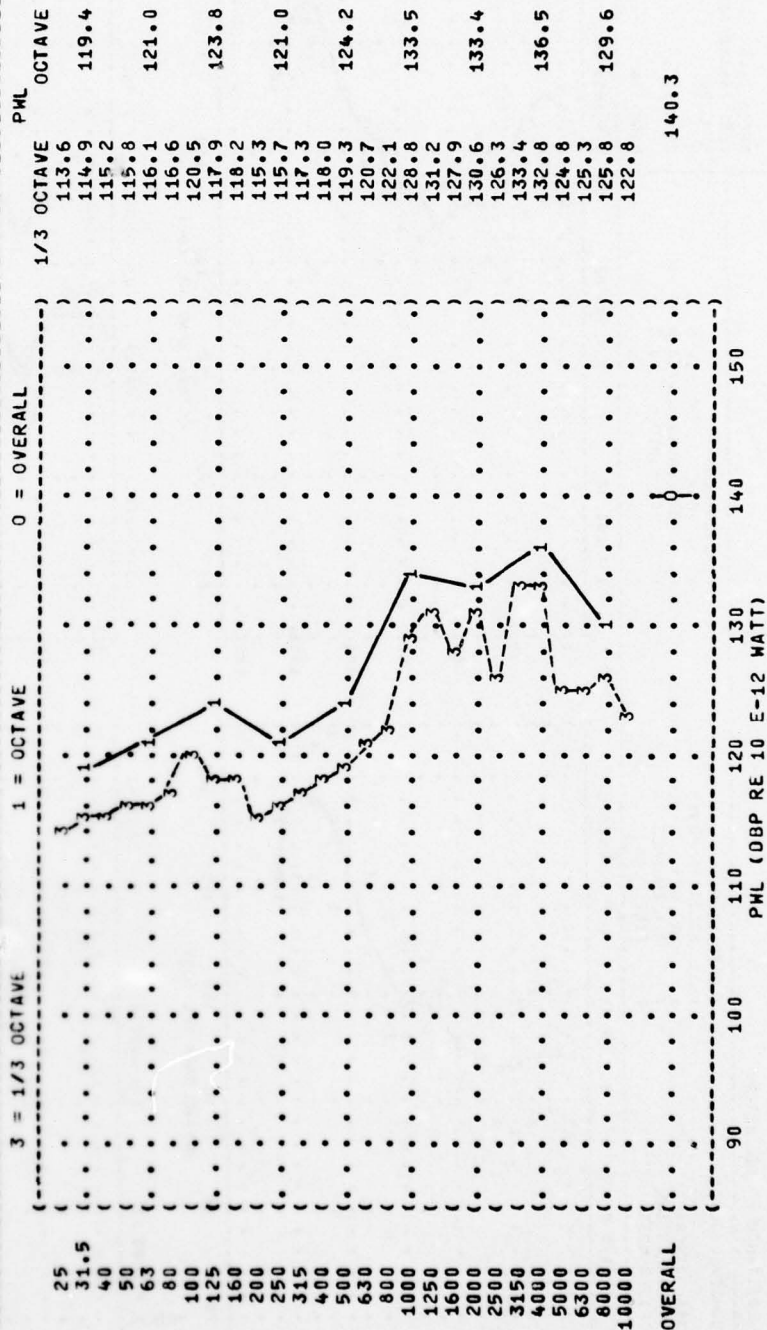
FREE FLOW

METEOROLOGY:

TEMP = 26 C

BAR PRESS = .741 M HG

REL HUMID = 45 %



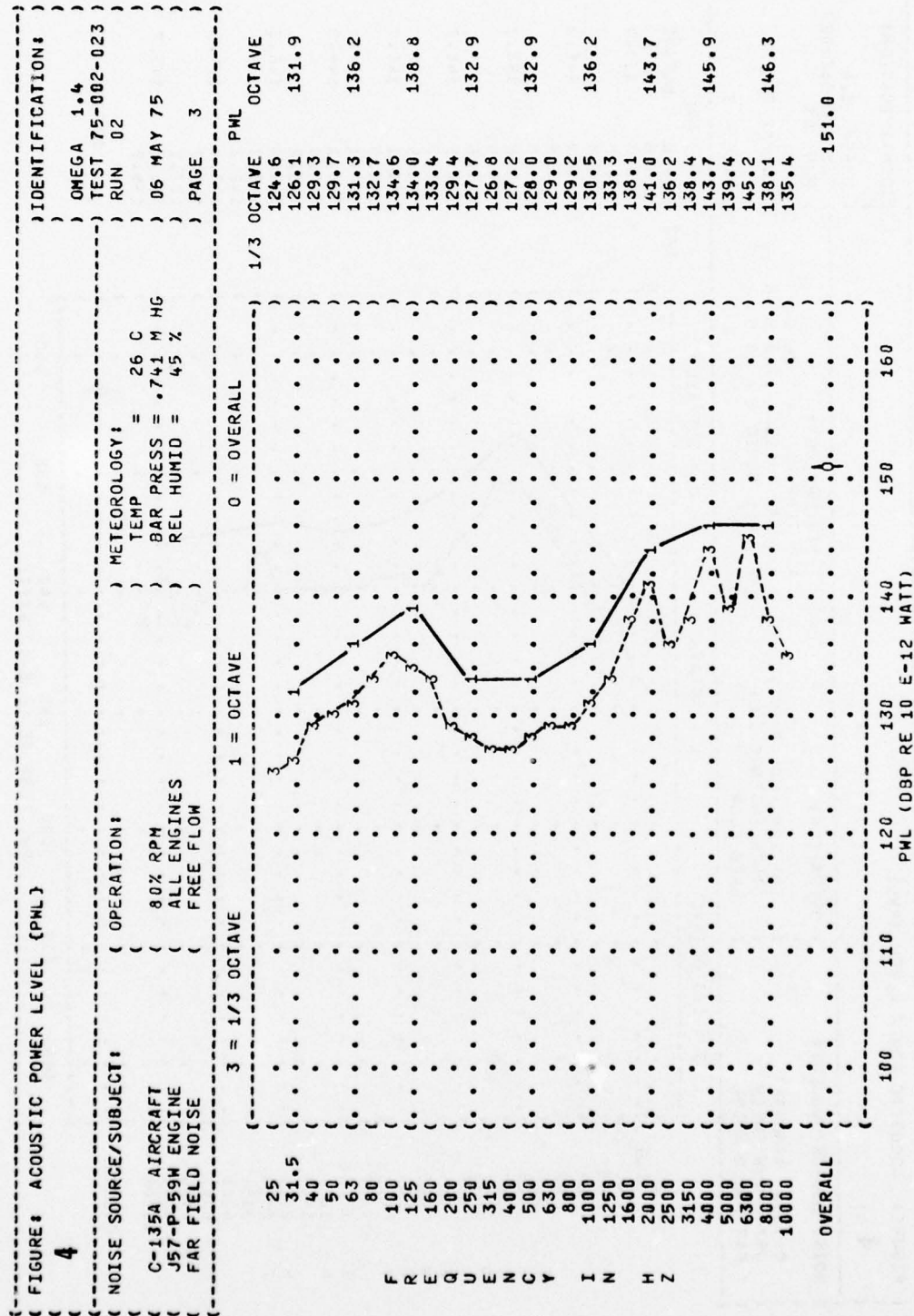






FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-023

RUN 04

06 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

90% RPM, NO. 2 ENGINE

OTHER ENGINES IDLE

FREE FLOW

METEOROLOGY:

TEMP = 26 C

BAR PRESS = .741 M HG

REL HUMID = 45 %

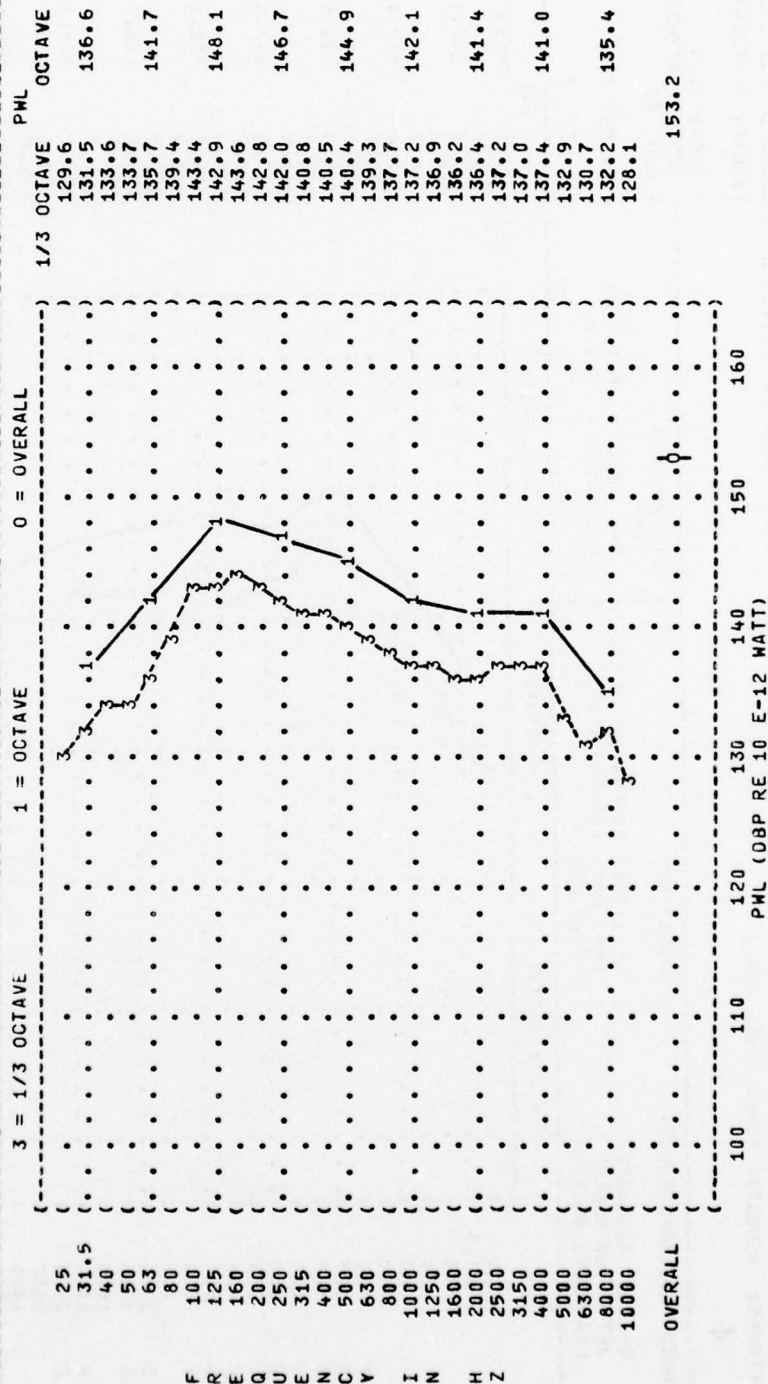


FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-023

RUN 05

06 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

MILITARY POWER, NO. 3 ENG

96% RPM, (OTHERS IDLE)

FREE FLOW

METEOROLOGY:

TEMP = 26 C

BAR PRESS = .741 M HG

REL HUMID = 45 %

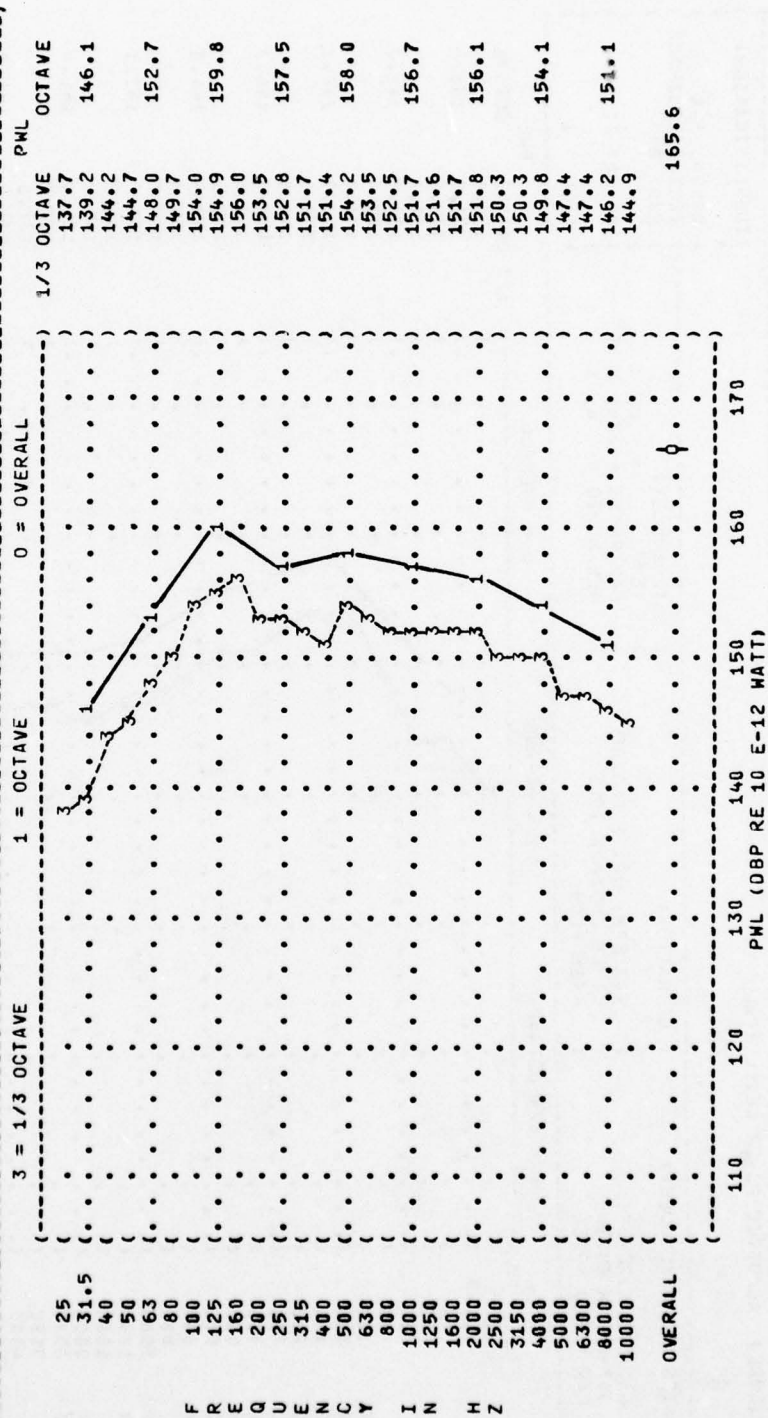




FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-023

RUN 06

06 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

MILITARY POWER

96% RPM

ALL ENGINES

FREE FLOW

METEOROLOGY:

TEMP = 26 C

BAR PRESS = .741 M HG

REL HUMID = 45 %

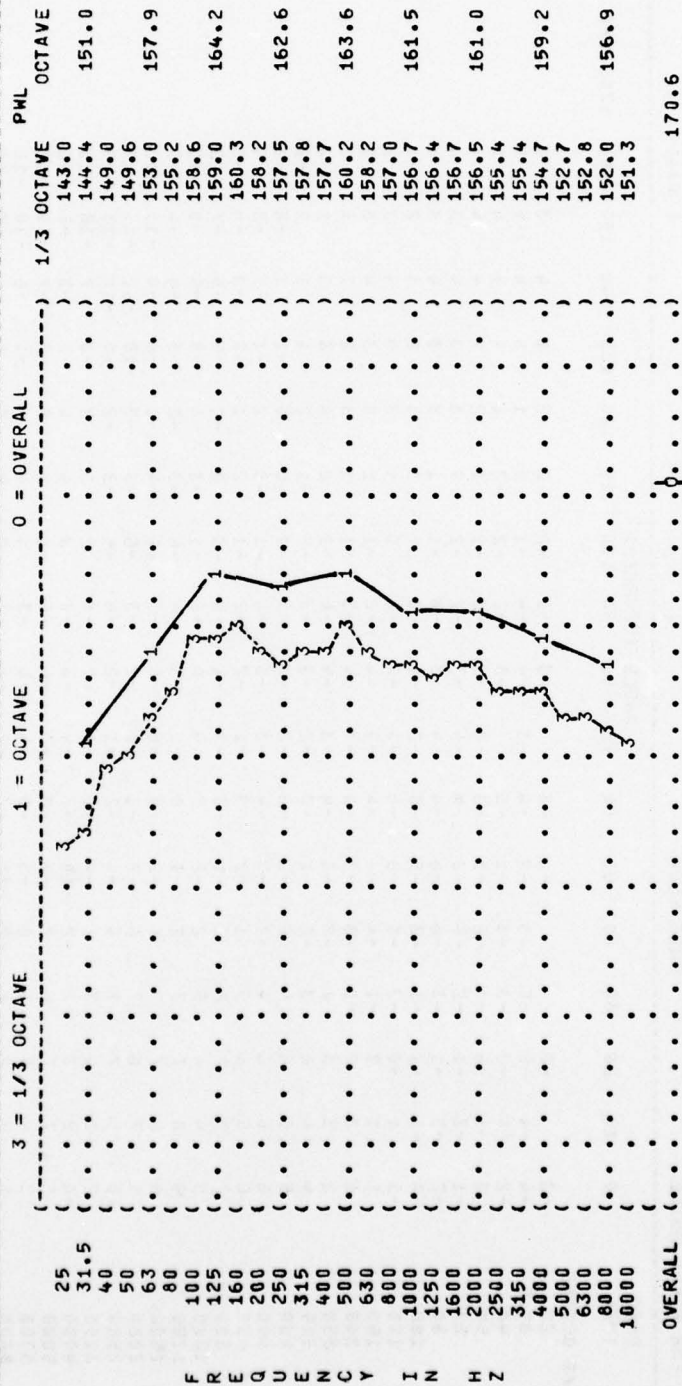


TABLE: DIRECTIVITY INDEX (DB)																
6																
NOISE SOURCE/SUBJECT:																
C-135A AIRCRAFT																
J57-P-59W ENGINE																
FAR FIELD NOISE																
OPERATION:																
( IDLE																
( 63% RPM																
( ALL ENGINES																
( FREE FLOW																
METEOROLOGY:																
TEMP = 26 C																
BAR PRESS = .741 M HG																
REL HUMID = 45 %																
PAGE 4																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-3	-4	-2	-5	-1	-3	-3	-1	-0	3	2	1	4	4	3	5
31.5	-4	-4	-3	-3	-1	-5	-3	-2	-1	-3	1	1	4	5	5	4
40	-2	-1	-0	-1	-2	-1	-3	-3	-2	0	2	2	1	4	4	5
50	0	-1	-0	-1	-2	-1	-3	-4	-2	0	3	3	3	4	4	4
63	-1	-2	-1	-2	-3	-4	-4	-3	-2	0	3	3	3	4	3	4
80	-2	-3	-1	-3	-6	-4	-4	-3	-1	1	3	3	3	4	3	4
100	-3	-1	-1	-1	-3	-5	-3	-2	0	1	3	2	2	3	2	1
125	-1	1	0	-3	-5	-4	-3	-2	-2	1	3	3	4	4	2	2
160	1	1	2	-1	-4	-4	-3	-4	-2	1	3	3	3	4	3	1
200	1	3	2	-0	-3	-3	-3	-3	-3	1	3	2	2	4	3	2
250	2	3	3	1	-2	-3	-4	-4	-2	0	4	3	3	3	1	0
315	4	4	6	3	0	-1	-3	-3	-3	-1	2	1	1	1	0	-2
400	5	5	5	4	0	-2	-3	-2	-1	0	2	2	-1	-2	-2	-2
500	6	6	6	4	0	-3	-4	-3	-2	-1	0	2	-1	-3	-4	-6
630	6	6	6	5	1	-2	-3	-2	-2	0	1	2	-2	-3	-4	-6
800	7	7	7	7	2	-1	-3	-3	-4	-3	0	-4	-5	-5	-7	-10
1000	5	4	4	7	2	-2	-3	-4	0	-1	-3	-4	-5	-5	-9	-11
1250	9	8	7	7	2	-2	-3	-4	0	-4	-4	-6	-4	-4	-4	-5
1600	6	6	7	7	9	5	-2	-3	-5	-6	-4	-6	-8	-11	-13	-13
2000	6	7	6	7	6	-2	-3	-4	-6	-5	-5	-10	-12	-15	-17	-17
2500	10	8	7	7	5	-4	-2	-4	-5	-3	-2	-8	-10	-13	-15	-15
3150	2	2	4	3	1	-4	-2	-1	2	3	3	-3	-7	-10	-13	-13
4000	-0	2	3	2	-2	-10	-7	-4	-1	4	4	-1	-3	-6	-8	-8
5000	6	7	7	6	3	-6	-5	-3	-6	2	2	-2	-7	-10	-12	-12
6300	3	4	4	3	0	-8	-5	-4	-3	1	4	-1	-6	-10	-12	-12
8000	1	1	2	1	-2	-11	-7	-6	-5	2	5	1	-4	-7	-10	-10
10000	-0	0	-0	0	-3	-12	-8	-7	-6	2	6	0	-4	-8	-11	-11
OCTAVE																
31.5	-3	-5	-4	-5	-2	-4	-4	-3	-2	-1	0	2	4	4	4	5
63	-1	-2	-1	-2	-4	-3	-4	-3	-3	-1	0	3	3	3	3	4
125	-1	0	0	-2	-4	-5	-3	-2	-1	0	1	3	2	3	1	1
250	3	4	4	2	-1	-2	-3	-3	-3	0	3	3	2	2	1	0
500	6	6	6	5	0	-2	-3	-2	-1	1	1	1	-1	-3	-4	-4
1000	7	7	6	6	2	-2	-3	-2	-3	-2	-3	-2	-6	-6	-6	-6
2000	7	7	6	6	5	-2	-3	-2	-3	-4	-6	-4	-10	-13	-15	-15
4000	2	2	4	3	0	-6	-4	-4	-3	-4	-6	-4	-5	-8	-10	-10
6300	2	2	4	3	0	-6	-4	-4	-3	-4	2	3	-2	-5	-8	-10
8000	2	2	3	2	-1	-9	-6	-5	-5	2	5	4	-0	-5	-9	-11
OVERALL																
5	5	5	5	2	-4	-2	-1	-3	-2	-0	1	1	-3	-4	-5	-6

TABLE: DIRECTIVITY INDEX (DB)																			
IDENTIFICATION:																			
6																			
NOISE SOURCE/SUBJECT:																			
( OPERATION:																			
( C-135A AIRCRAFT																			
( J57-P-59W ENGINE																			
( FAR FIELD NOISE																			
METEOROLOGY:																			
( TEMP = 26 C																			
( BAR PRESS = .741 M HG																			
( REL HUMID = 45 %																			
PAGE 4																			
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
(HZ)																			
1/3 OCTAVE																			
25	-5	-7	-7	-7	-7	-5	-7	-4	-7	-2	-4	-2	-0	3	5	7	7		
31.5	-7	-7	-8	-10	-8	-6	-7	-7	-6	-4	-2	-1	-0	3	6	6	6		
40	-7	-8	-9	-9	-8	-7	-7	-7	-6	-4	-3	-1	1	4	5	6	6		
50	-8	-10	-9	-9	-8	-9	-8	-7	-6	-5	-4	-2	-0	2	6	7	7		
63	-8	-9	-9	-7	-7	-6	-6	-4	-4	-4	-2	-1	1	3	5	6	6		
80	-8	-8	-8	-8	-8	-9	-9	-7	-7	-4	-4	-2	1	4	6	7	5		
100	-8	-7	-7	-8	-8	-9	-9	-7	-7	-4	-2	-1	2	4	6	7	4		
125	-6	-6	-7	-6	-8	-7	-8	-7	-5	-3	-3	-1	2	4	6	6	3		
160	-5	-5	-6	-6	-8	-7	-8	-7	-6	-3	-3	0	2	5	6	5	3		
200	-1	-1	-2	-3	-6	-6	-7	-7	-6	-3	-3	0	2	4	5	2	2		
250	0	1	1	-0	-3	-4	-6	-6	-6	-3	-3	1	3	4	5	2	2		
315	2	2	2	-1	-3	-4	-4	-4	-4	-5	-1	2	2	4	4	2	1		
400	2	2	2	-0	-2	-4	-3	-3	-3	-3	0	2	2	3	3	1	0		
500	2	2	2	0	-2	-4	-2	-2	-3	-3	1	2	2	3	1	-0	-1		
630	5	5	4	3	-1	-3	-2	-2	-3	-3	2	2	0	1	-1	-3	-4		
800	5	5	4	4	0	-1	-2	-2	-3	-3	1	4	1	-0	-6	-7	-8		
1000	6	5	5	5	2	0	-2	-3	-4	-5	-3	-0	-1	-3	-8	-10	-11		
1250	12	9	7	6	4	4	5	1	0	-4	-7	-5	-5	-8	-11	-14	-15		
1600	5	4	4	8	3	1	4	1	-3	-7	-8	-7	-8	-11	-14	-16	-18		
2000	7	6	6	8	5	3	1	-1	-3	-6	-7	-4	-6	-8	-12	-15	-17		
2500	6	5	5	6	4	3	3	2	-3	-4	-5	-5	-6	-9	-13	-15	-19		
3150	5	5	5	5	3	3	3	2	-1	-3	-4	-5	-6	-9	-12	-17	-20		
4000	5	4	5	6	4	4	4	3	-1	-4	-5	-7	-9	-12	-17	-20	-25		
5000	5	4	5	5	4	2	0	0	-2	-2	-2	0	-2	-8	-13	-17	-21		
6300	-3	-2	-2	-1	-3	-4	-6	-5	-5	-2	0	7	4	-2	-9	-13	-18		
8000	4	4	4	4	4	1	0	-0	-3	-2	-3	1	0	-4	-9	-13	-19		
10000	3	4	4	4	4	0	-0	-1	-3	-1	-1	2	0	-5	-9	-13	-19		
OCTAVE																			
31.5	-7	-7	-8	-8	-8	-6	-7	-6	-6	-3	-3	-1	0	4	5	7	7		
63	-8	-9	-6	-8	-7	-8	-7	-6	-5	-4	-3	-1	1	3	6	6	6		
125	-6	-6	-6	-7	-8	-8	-8	-7	-6	-4	-3	-1	2	4	5	4	2		
250	0	0	0	-1	-4	-5	-6	-6	-6	-4	-2	1	2	4	5	4	2		
500	4	3	3	1	-1	-3	-2	-3	-3	-3	1	2	0	-2	-6	-8	-8		
1000	10	8	6	6	3	-1	-3	-3	-4	-7	-6	-4	-7	-9	-13	-15	-17		
2000	6	6	5	8	4	2	2	1	-4	-7	-6	-4	-6	-10	-15	-18	-22		
4000	5	5	5	6	4	3	2	2	-2	-4	-6	-4	-6	-10	-15	-18	-22		
8000	-1	-0	-0	0	-1	-3	-4	-4	-2	-0	-0	6	4	-3	-9	-13	-18		
OVERALL	4	4	3	5	2	0	0	-1	-3	-3	-3	1	-0	-2	-1	-1	-3		



TABLE: DIRECTIVITY INDEX (DB)																
6																
NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ) IDENTIFICATION: )																
C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE ) TEMP = 26 C ) OMEGA 1.4																
J57-P-59M ENGINE ( OTHER ENGINES IDLE ) BAR PRESS = .741 M HG ) TEST 75-002-023																
FAR FIELD NOISE ( FREE FLOW ) REL HUMID = 45 % ) RUN 03																
FREQ ( HZ) 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																
1/3 OCTAVE																
25	-11	-12	-11	-10	-8	-6	-2	-4	-5	-5	-3	-0	2	4	8	7
31.5	-12	-11	-8	-12	-11	-9	-5	-5	-5	-6	-3	-1	4	7	7	5
40	-13	-13	-13	-14	-11	-11	-6	-5	-6	-6	-5	-0	4	7	8	3
50	-15	-14	-16	-12	-14	-10	-9	-8	-7	-6	-1	1	3	8	8	1
63	-14	-14	-14	-12	-14	-12	-11	-9	-8	-6	-4	2	6	7	7	-2
80	-16	-16	-13	-14	-13	-12	-10	-9	-8	-5	-0	4	10	5	5	-9
100	-16	-13	-14	-15	-16	-13	-11	-11	-10	-9	-5	1	7	9	3	-10
125	-16	-16	-16	-16	-16	-14	-12	-12	-10	-9	-6	-2	6	10	5	-11
160	-17	-16	-15	-15	-17	-15	-15	-14	-11	-9	-6	-3	4	10	4	-9
200	-10	-11	-9	-10	-13	-13	-12	-11	-10	-9	-5	-0	2	10	6	-6
250	-7	-9	-8	-9	-12	-12	-12	-11	-9	-9	-6	0	4	8	8	-5
315	-7	-6	-6	-7	-9	-10	-9	-9	-7	-6	-3	1	5	7	7	-3
400	-5	-7	-5	-5	-9	-10	-8	-6	-4	-4	-1	3	3	7	7	-5
500	-6	-6	-5	-5	-9	-10	-8	-6	-3	-3	1	3	4	7	6	-8
630	-6	-6	-5	-5	-9	-10	-8	-4	-3	-2	1	4	5	6	4	-10
800	-6	-6	-5	-3	-8	-10	-7	-4	-3	-2	1	3	5	4	2	-10
1000	-5	-3	-3	-1	-6	-8	-4	-2	-1	-1	3	4	4	3	0	-13
1250	-1	0	-1	-1	-7	-9	-5	-2	-1	-1	4	4	4	2	-0	-13
1600	-5	-3	-0	-0	-6	-8	-5	-3	-1	-1	4	4	3	2	-0	-14
2000	-3	-1	1	0	-3	-7	-3	-4	-2	-2	3	5	4	1	-3	-16
2500	2	-0	5	5	4	-2	3	-1	-2	-3	-1	0	-2	-5	-8	-22
3150	-2	-3	1	1	-4	-5	-1	-2	-1	-0	4	4	2	-1	-5	-18
4000	-0	-2	1	0	-5	-3	-2	-2	0	1	5	3	1	-2	-6	-17
5000	3	1	4	3	-2	-3	2	-1	0	0	3	2	0	-3	-7	-20
6300	1	-3	0	1	-4	-6	-0	-2	-1	2	3	1	1	-1	-5	-18
8000	-2	-4	-2	-2	-6	-8	-3	-4	-1	3	5	3	0	-4	-8	-19
10000	-0	-4	-1	-2	-5	-7	-2	-4	-2	1	4	4	2	-1	-6	-17
OCTAVE																
31.5	-13	-12	-11	-12	-13	-10	-8	-7	-6	-5	-4	-0	3	7	8	4
63	-14	-15	-13	-13	-14	-13	-11	-10	-9	-8	-4	1	5	9	6	-4
125	-16	-16	-15	-15	-16	-15	-14	-13	-12	-10	-6	-1	5	10	4	-10
250	-8	-9	-8	-9	-12	-13	-12	-11	-10	-9	-5	0	4	9	7	-5
500	-6	-6	-5	-5	-9	-10	-8	-5	-3	-3	0	3	4	7	6	-7
1000	-4	-2	-3	-2	-7	-9	-5	-3	-1	-1	3	4	4	3	1	-13
2000	-0	-1	3	3	2	-4	1	-3	-2	-3	2	3	2	-1	-4	-18
4000	0	-1	2	1	-4	-5	-0	-3	-2	-0	4	3	1	-1	-5	-18
8000	-1	-4	-1	-1	-5	-7	-2	-3	-1	3	4	3	1	-2	-6	-18
OVERALL	-7	-7	-5	-5	-8	-11	-7	-8	-7	-5	-2	1	5	8	5	-7

TABLE: DIRECTIVITY INDEX (DB)																
IDENTIFICATION:																
6																
NOISE SOURCE/SUBJECT:																
OPERATION:																
METEOROLOGY:																
TEMP = 26 C																
BAR PRESS = .741 M HG																
REL HUMID = 45 %																
PAGE 4																
TEST 75-002-023																
RUN 04																
OMEGA 1.4																
06 MAY 75																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-7	-8	-10	-8	-10	-9	-9	-10	-8	-10	-9	-9	-10	-8	-10	-9
31.5	-6	-10	-9	-9	-11	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
40	-7	-9	-10	-7	-9	-9	-9	-9	-8	-7	-6	-5	-9	-5	-9	-5
50	-8	-10	-10	-8	-10	-11	-9	-9	-9	-8	-6	-11	-2	-1	-1	-1
63	-7	-9	-10	-7	-10	-11	-10	-10	-10	-7	-8	-12	-4	-2	1	5
80	-8	-9	-11	-8	-12	-11	-11	-11	-11	-11	-12	-12	-8	-1	4	11
100	-10	-11	-13	-12	-14	-14	-13	-13	-12	-10	-11	-14	-8	-2	2	11
125	-9	-11	-11	-10	-13	-12	-12	-12	-14	-12	-10	-13	-6	-3	0	2
160	-9	-10	-9	-8	-12	-11	-11	-11	-13	-12	-10	-12	-5	-2	4	10
200	-5	-6	-7	-9	-12	-12	-13	-13	-15	-15	-14	-14	-6	-4	2	10
250	-2	-4	-7	-7	-12	-12	-13	-13	-17	-16	-13	-12	-5	-4	-0	10
315	-4	-5	-6	-5	-10	-11	-11	-11	-14	-14	-10	-10	-2	-1	4	8
400	-3	-4	-6	-5	-10	-10	-9	-9	-13	-14	-10	-8	-2	-1	2	10
500	-3	-4	-6	-5	-10	-12	-10	-13	-13	-13	-8	-8	-0	-1	3	2
630	-3	-3	-5	-5	-11	-11	-8	-11	-11	-11	-7	-8	0	1	3	1
800	-1	-2	-3	-3	-9	-9	-7	-11	-11	-11	-6	-6	-0	-3	1	10
1000	2	0	0	0	-6	-5	-5	-7	-3	-5	-1	-1	-1	-4	-0	8
1250	7	4	1	0	-4	-2	-1	-6	-8	-4	-6	-1	-1	-4	-0	8
1600	2	3	2	1	-2	-2	-5	-10	-9	-4	-5	-1	-1	-4	-0	9
2000	3	4	4	4	-2	-1	-3	-6	-5	-4	-6	-3	-1	-5	-1	7
2500	7	9	9	8	-4	-3	-5	-9	-9	-6	-8	-5	-5	-7	-4	3
3150	4	4	2	4	-3	0	1	-4	-4	-4	-0	-4	3	1	-3	3
4000	2	2	1	3	-5	-3	-5	-7	-8	-1	-4	-4	6	4	-1	1
5000	9	9	6	8	-2	-2	-3	-7	-8	-4	-7	-2	-2	-5	-4	1
6300	7	7	5	6	-3	-2	-2	-5	-6	-2	-5	-1	3	3	-2	3
8000	7	6	4	5	-6	-3	-2	-5	-5	-0	-3	3	3	3	-2	1
10000	7	6	3	5	-6	-4	-3	-5	-6	-1	-3	3	3	-1	-1	2
OCTAVE																
31.5	-7	-9	-10	-8	-10	-9	-9	-9	-8	-6	-6	-9	-3	-2	5	8
63	-8	-9	-10	-8	-11	-11	-10	-11	-11	-9	-9	-12	-5	-1	5	10
125	-9	-10	-11	-10	-13	-12	-12	-12	-12	-11	-10	-13	-6	-2	3	11
250	-4	-5	-6	-7	-11	-12	-12	-15	-15	-15	-12	-12	-4	-3	2	9
500	-3	-4	-6	-5	-10	-11	-9	-13	-12	-8	-1	-0	-3	-2	2	10
1000	3	1	-0	-1	-6	-5	-2	-7	-8	-4	-6	-1	-0	-3	0	9
2000	5	6	6	6	-3	-2	-4	-8	-7	-4	-6	-3	-2	-5	-2	7
4000	5	4	3	5	-3	-1	-1	-6	-6	-1	-4	4	2	-3	-3	2
8000	7	6	4	6	-5	-3	-2	-5	-6	-1	-4	2	2	-2	-2	0
OVERALL																
	-1	-2	-3	-2	-9	-8	-8	-11	-10	-8	-9	-3	-1	-2	2	10
																9

TABLE: DIRECTIVITY INDEX (DB)																
IDENTIFICATION:																
6																
NOISE SOURCE/SUBJECT:																
C-135A AIRCRAFT																
J57-P-59M ENGINE																
FAR FIELD NOISE																
OPERATION:																
( MILITARY POWER, NO. 3 ENG )																
( 96% RPM, (OTHERS IDLE) )																
( FREE FLOW )																
METEOROLOGY:																
TEMP = 26 C																
BAR PRESS = .741 M HG																
REL HUMID = 45 %																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-14	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
31.5	-14	-11	-12	-13	-12	-10	-8	-6	-5	-6	-6	-5	-4	-1	1	5
40	-17	-16	-16	-15	-15	-15	-13	-11	-9	-6	-7	-9	-10	-7	-4	4
50	-15	-16	-17	-15	-15	-15	-13	-11	-9	-10	-7	-5	-5	-5	-3	3
63	-16	-17	-16	-14	-15	-15	-13	-12	-11	-9	-8	-5	-5	-5	-2	7
80	-15	-16	-14	-15	-15	-16	-13	-11	-10	-10	-8	-5	-5	-5	-3	7
100	-16	-17	-15	-15	-17	-18	-13	-11	-12	-10	-5	3	7	8	6	-4
125	-17	-17	-16	-15	-15	-18	-15	-13	-11	-11	-7	-6	2	7	8	2
160	-16	-15	-14	-14	-17	-18	-17	-14	-10	-10	-7	-4	1	8	8	3
200	-10	-11	-10	-11	-15	-16	-12	-11	-13	-10	-7	-4	2	6	9	4
250	-10	-13	-10	-12	-13	-15	-13	-13	-13	-8	-7	-5	3	6	9	3
315	-11	-11	-9	-11	-13	-14	-13	-12	-13	-9	-5	-3	1	6	9	2
400	-7	-8	-8	-11	-12	-11	-11	-12	-11	-7	-3	-2	1	4	9	2
500	-4	-4	-4	-5	-10	-13	-8	-12	-7	-3	-3	-1	1	2	10	3
630	-6	-6	-5	-4	-10	-13	-11	-11	-10	-5	-3	-1	1	2	9	3
800	-5	-6	-5	-2	-10	-13	-10	-9	-10	-5	-2	1	1	4	8	4
1000	-7	-6	-6	-3	-11	-14	-9	-8	-9	-4	-1	2	2	4	7	2
1250	-7	-6	-6	-3	-13	-16	-11	-9	-9	-4	-1	3	3	5	6	-0
1600	-8	-7	-6	-3	-14	-15	-10	-8	-10	-3	0	4	4	4	6	-1
2000	-9	-8	-9	-6	-17	-18	-13	-11	-11	-3	-0	4	5	4	5	-2
2500	-4	-5	-5	-2	-13	-13	-9	-8	-10	-3	-0	5	4	4	4	-2
3150	-5	-5	-5	-3	-13	-13	-7	-7	-10	-3	-1	5	5	4	4	-2
4000	-8	-8	-8	-6	-16	-17	-12	-10	-12	-2	-0	5	5	4	4	-2
5000	-5	-6	-5	-4	-14	-14	-9	-8	-11	-2	0	4	5	4	4	-2
6300	-6	-8	-7	-6	-15	-16	-10	-9	-12	-2	-0	5	5	4	5	-2
8000	-7	-8	-7	-5	-15	-16	-9	-9	-10	-1	-1	4	5	4	5	-2
10000	-9	-9	-8	-7	-15	-17	-10	-9	-11	-1	-0	4	4	4	5	-2
OCTAVE																
31.5	-16	-14	-14	-14	-14	-14	-11	-9	-9	-8	-7	-6	-1	4	7	8
63	-15	-17	-15	-15	-16	-16	-13	-11	-11	-9	-7	-5	1	6	7	7
125	-17	-16	-15	-15	-16	-18	-15	-13	-12	-10	-8	-5	2	7	8	3
250	-10	-11	-10	-11	-14	-15	-13	-12	-13	-9	-6	-4	2	6	9	3
500	-6	-5	-5	-3	-10	-13	-10	-9	-9	-4	-3	-2	0	2	10	3
1000	-6	-6	-5	-3	-11	-14	-10	-8	-9	-4	-1	2	2	4	8	2
2000	-7	-7	-7	-4	-14	-15	-11	-9	-11	-3	-0	4	4	4	5	-1
4000	-6	-6	-6	-4	-14	-14	-9	-8	-11	-2	-0	5	5	4	4	-2
8000	-7	-8	-7	-5	-15	-16	-9	-9	-10	-1	-1	4	5	4	5	-2
OVERALL	-8	-9	-8	-7	-13	-15	-11	-11	-11	-6	-3	-0	2	5	8	3
																-6



TABLE: DIRECTIVITY INDEX (DB)																
6																
NOISE SOURCE/SUBJECT:																
OPERATION:																
MILITARY POWER																
C-135A AIRCRAFT																
J57-P-59W ENGINE																
FAR FIELD NOISE																
TEMP = 26 C																
BAR PRESS = .741 M HG																
REL HUMID = 45 %																
PAGE 4																
IDENTIFICATION:																
OMEGA 1.4																
TEST 75-002-023																
RUN 06																
06 MAY 75																
FREQ (HZ)																
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																
1/3 OCTAVE																
25																
31.5																
40																
50																
63																
80																
100																
125																
160																
200																
250																
315																
400																
500																
630																
800																
1000																
1250																
1600																
2000																
2500																
3150																
4000																
5000																
6300																
8000																
10000																
OCTAVE																
31.5																
63																
125																
250																
500																
1000																
2000																
4000																
8000																
OVERALL																

(-----)  
(( FIGURE: OVERALL SOUND PRESSURE LEVEL {OASPL}  
(  
( EQUAL LEVEL CONTOURS (DB)  
(  
( 5  
(-----)  
(( NOISE SOURCE/SUBJECT:  
(  
( C-135A AIRCRAFT  
( J57-P-59W ENGINE  
( FAR FIELD NOISE

(( OPERATION:  
( IDLE  
( 63% RPM  
( ALL ENGINES  
( FREE FLOW

(( METEOROLOGY:  
( TEMP = 15 C  
( BAR PRESS = .760 M HG  
( REL HUMID = 70 %  
( )

(( IDENTIFICATION:  
( )  
( ) OMEGA 1.4  
( TEST 75-002-023 )  
( RUN 01 )  
( )  
( ) 06 MAY 75  
( )  
( ) PAGE 13  
( )

[illegible]





IDENTIFICATION:

4.

## METEOROLOGY:

03  
RUN

BAR PRESS = .760 M HG  
REL HUMID = 70 %

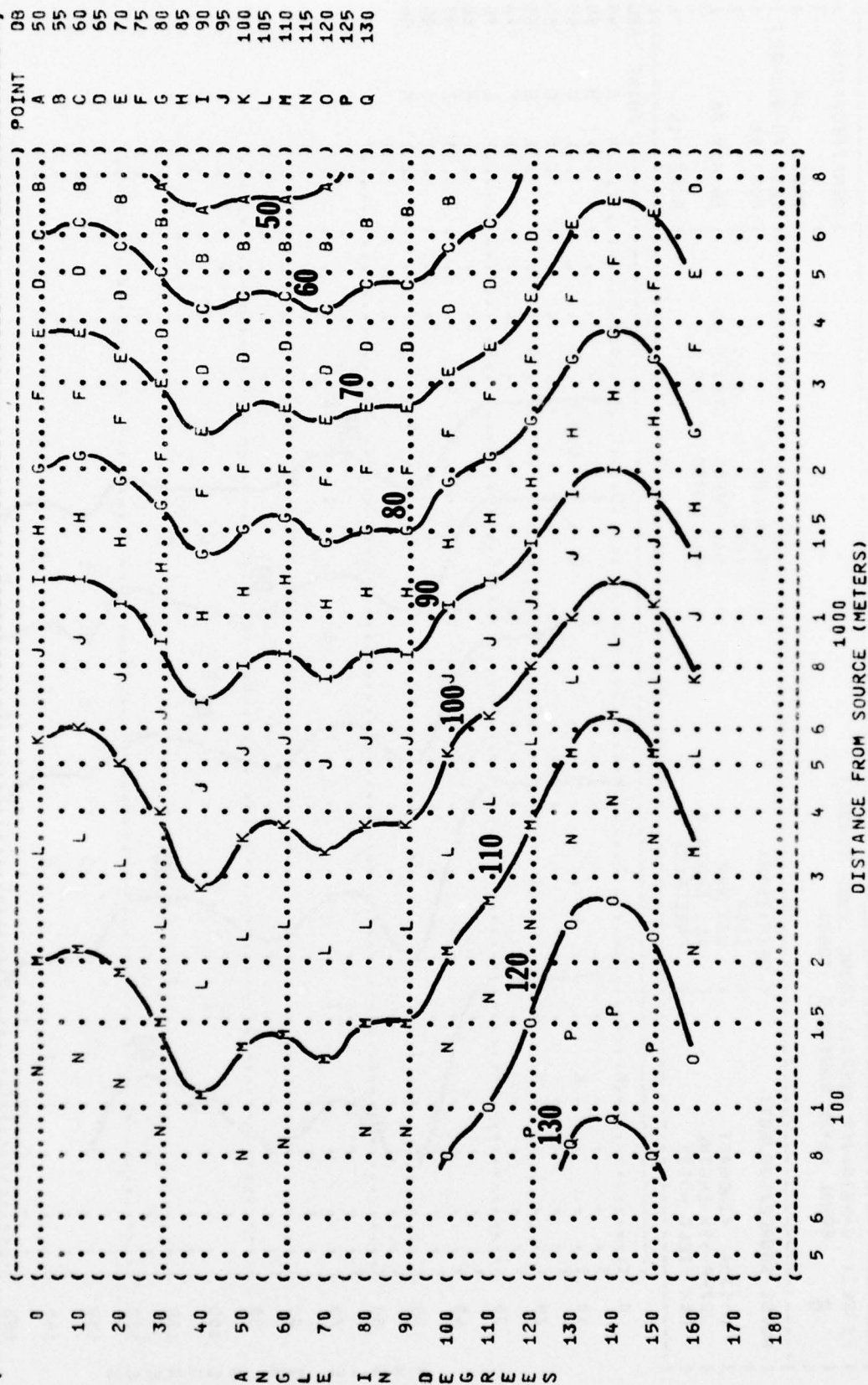


DISTANCE FROM SOURCE (METERS)





( FIGURE: OVERALL SOUND PRESSURE LEVEL {OASPL}  
( EQUAL LEVEL CONTOURS (DB)  
( 5  
(-----  
( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
( ( MILITARY POWER ) TEMP = 15 C  
( ( 96% RPM ) BAR PRESS = .760 M HG  
( ( ALL ENGINES ) REL HUMID = 70 %  
( ( FREE FLOW )  
(-----  
( C-135A AIRCRAFT  
( J57-P-59W ENGINE  
( FAR FIELD NOISE  
(-----  
) IDENTIFICATION: )  
) )  
) OMEGA 1.4  
) TEST 75-002-023  
) RUN 06  
) 06 MAY 75  
) )  
) PAGE 13



[illegible]

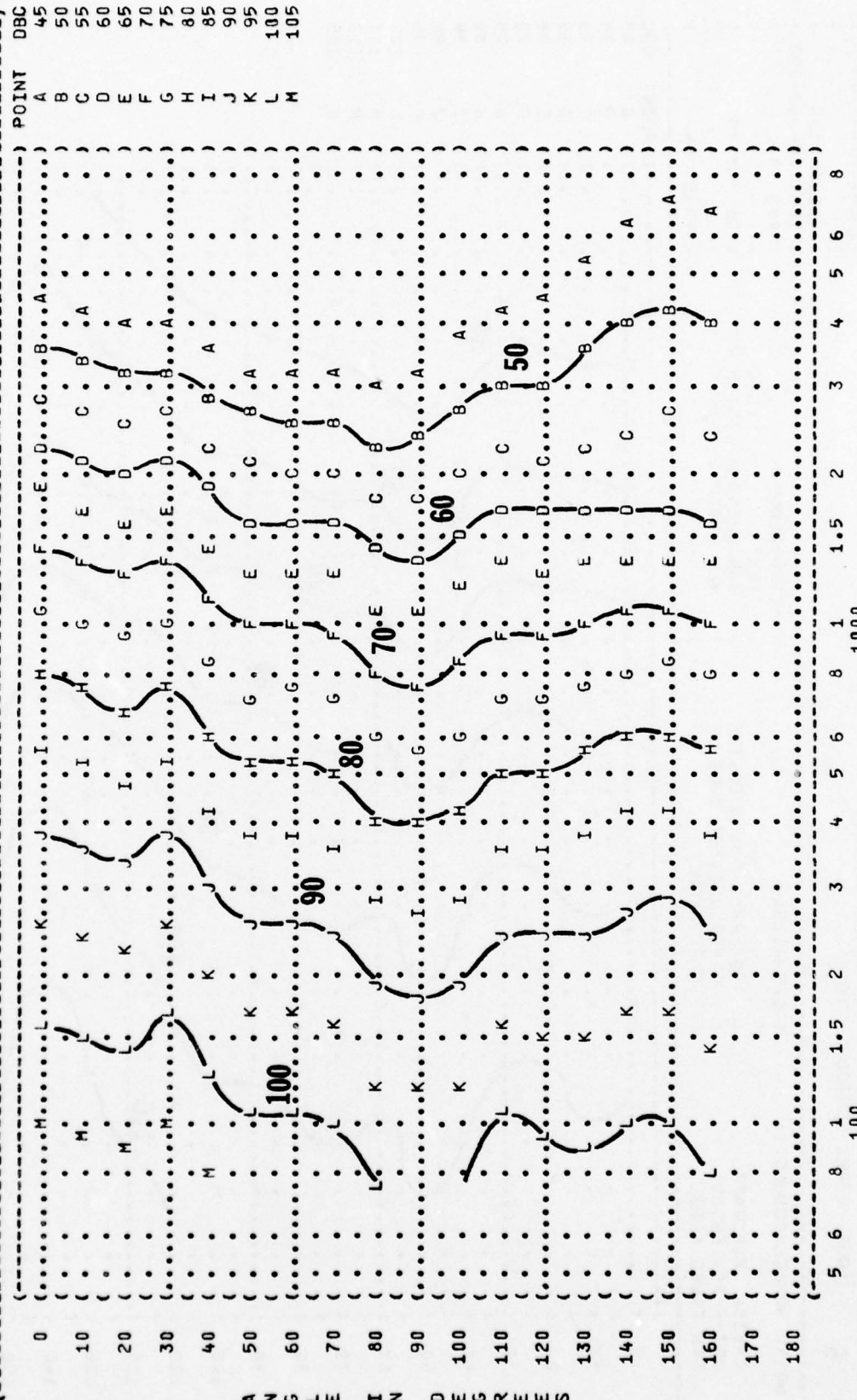
NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:	TEMP	BAR PRESS	REL HUMID	PAGE
( )	( ) IDLE	( )	= 15 C	= .760 M HG	= 70 %	06 MAY 75
( ) C-135A AIRCRAFT	( ) 63% RPM	( )				
( ) J57-P-59W ENGINE	( ) ALL ENGINES	( )				
( ) FAR FIELD NOISE	( ) FREE FLOW	( )				PAGE 14

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

420 JE HZ 0504555

FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 IDENTIFICATION:  
 6  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 02  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 NOISE SOURCE/SUBJECT:  
 OPERATION:  
 C-135A AIRCRAFT  
 80% RPM  
 J57-P-59W ENGINE  
 ALL ENGINES  
 FAR FIELD NOISE  
 FREE FLOW  
 06 MAY 75  
 PAGE 14



A N G L E I N D E G R E E S



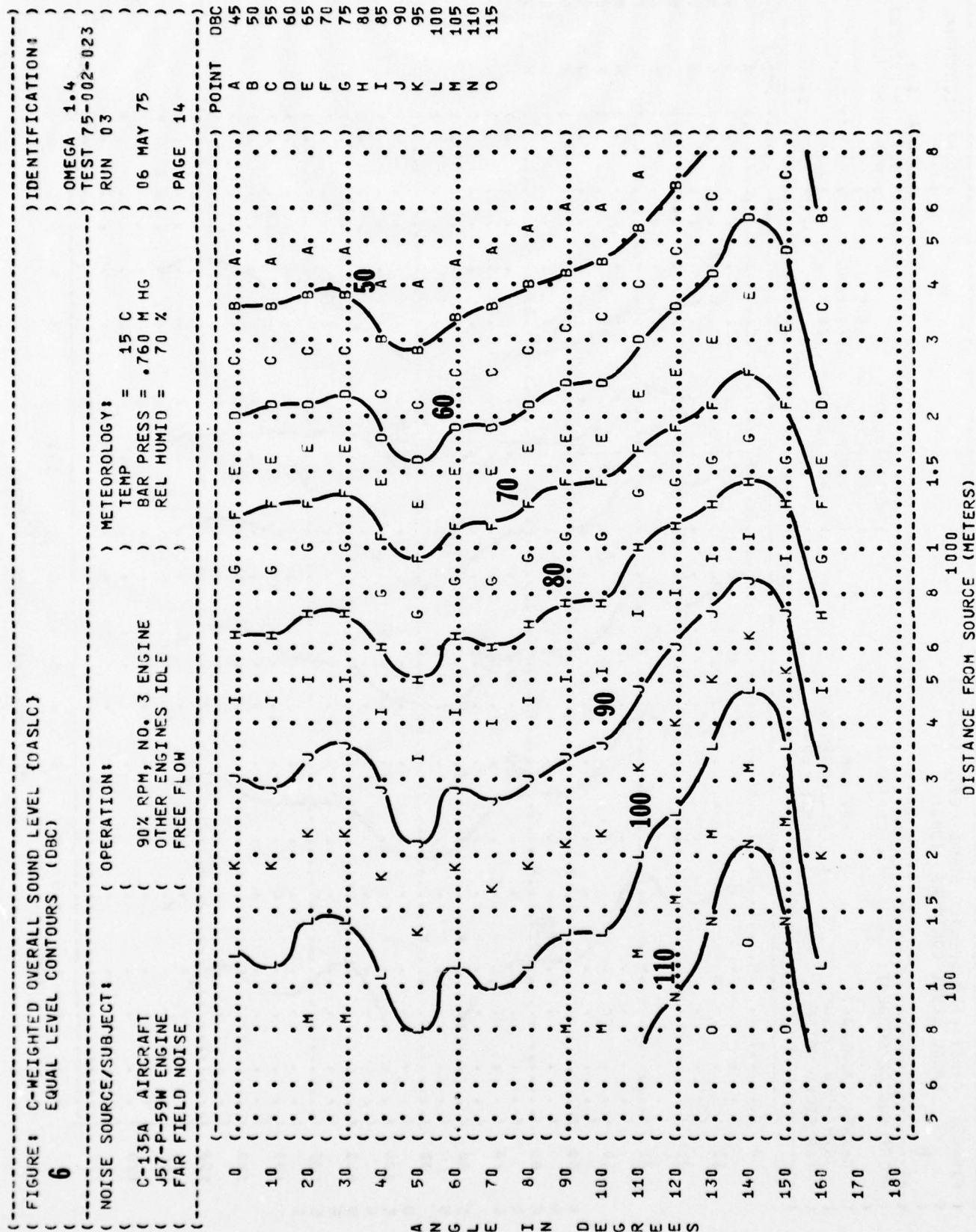




FIGURE: C-WEIGHTED OVERALL SOUND LEVEL {OASLC}  
EQUAL LEVEL CONTOURS (DBC)

3

NOISE SOURCE/SUBJECT:	( OPERATION:	METEOROLOGY:	LOC. RUN 05
C-135A AIRCRAFT	( MILITARY POWER, NO. 3 ENG	TEMP = 15 C	
J57-P-59W ENGINE	( 96% RPM, (OTHERS IDLE)	BAR PRESS = .760 M HG	06 MAY 75
FAR FIELD NOISE	( FREE FLOW	REL HUMID = 70 %	PAGE 14

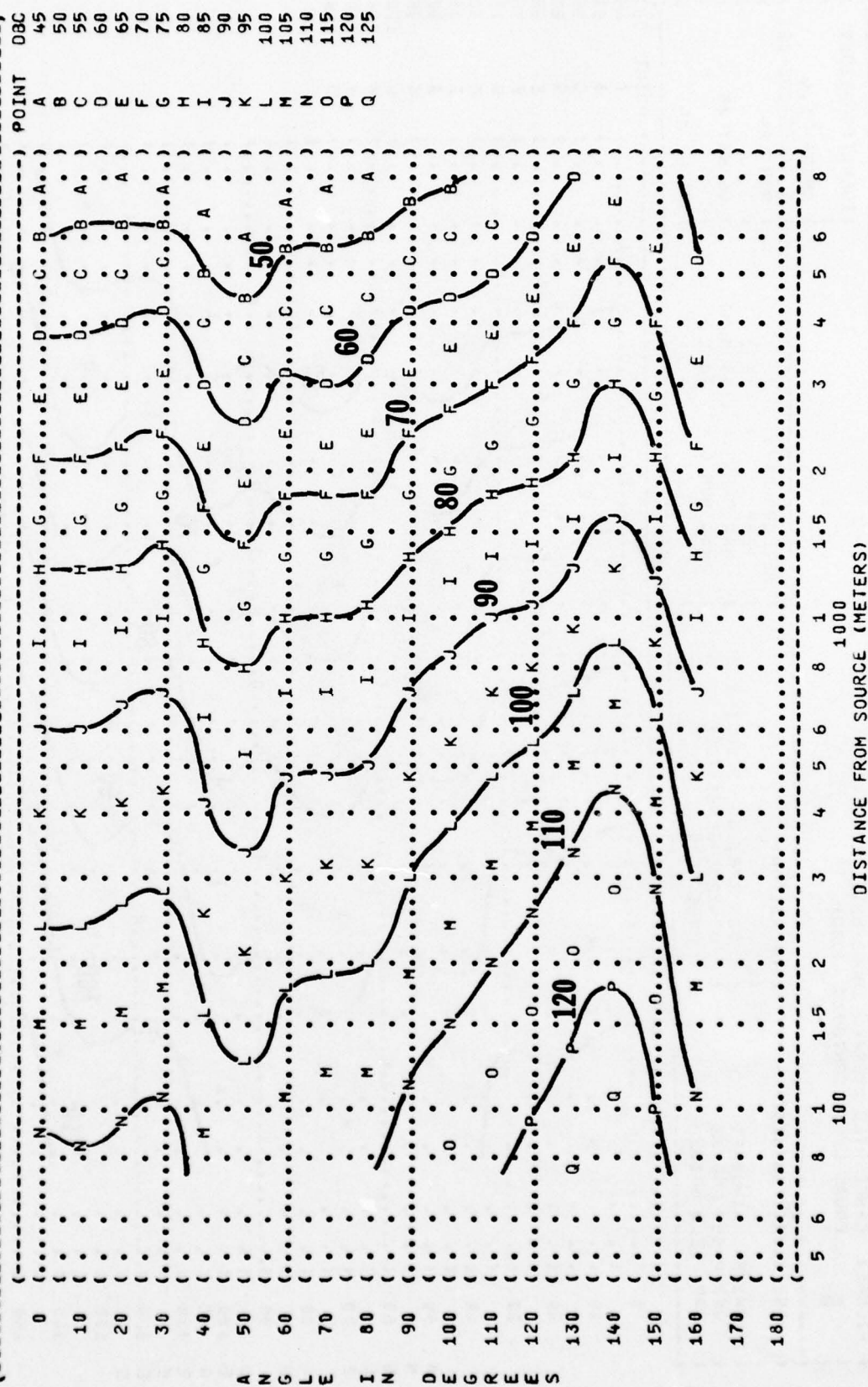




FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 6  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 06  
 NOISE SOURCE/SUBJECT:  
 OPERATION:  
 MILITARY POWER  
 C-135A AIRCRAFT  
 96% RPM  
 BAR PRESS = .760 M HG  
 J57-P-59M ENGINE  
 ALL ENGINES  
 REL HUMID = 70 %  
 FAR FIELD NOISE  
 FREE FLOW  
 TEMP = 15 C  
 METEOROLOGY:  
 06 MAY 75  
 PAGE 14

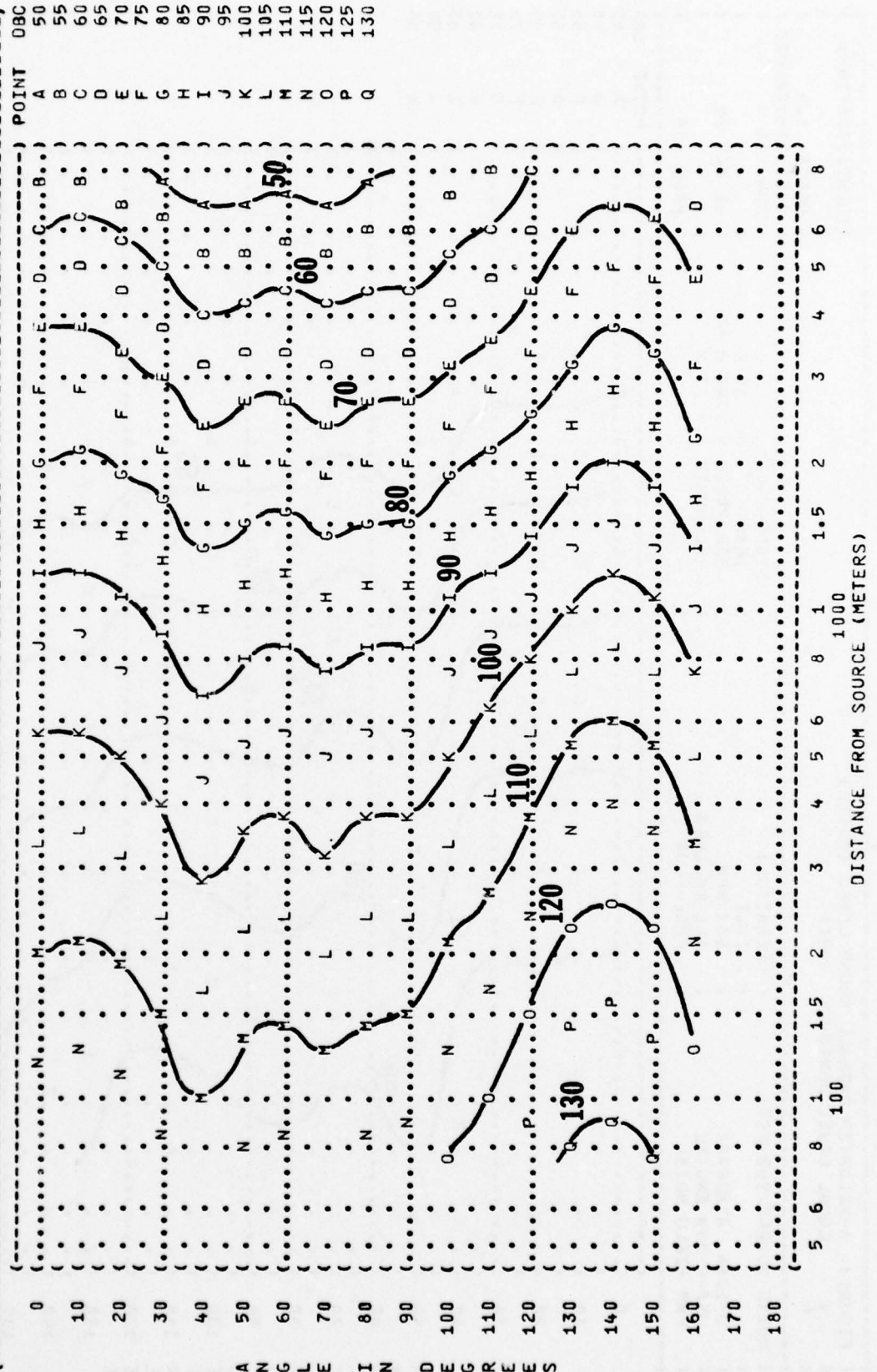
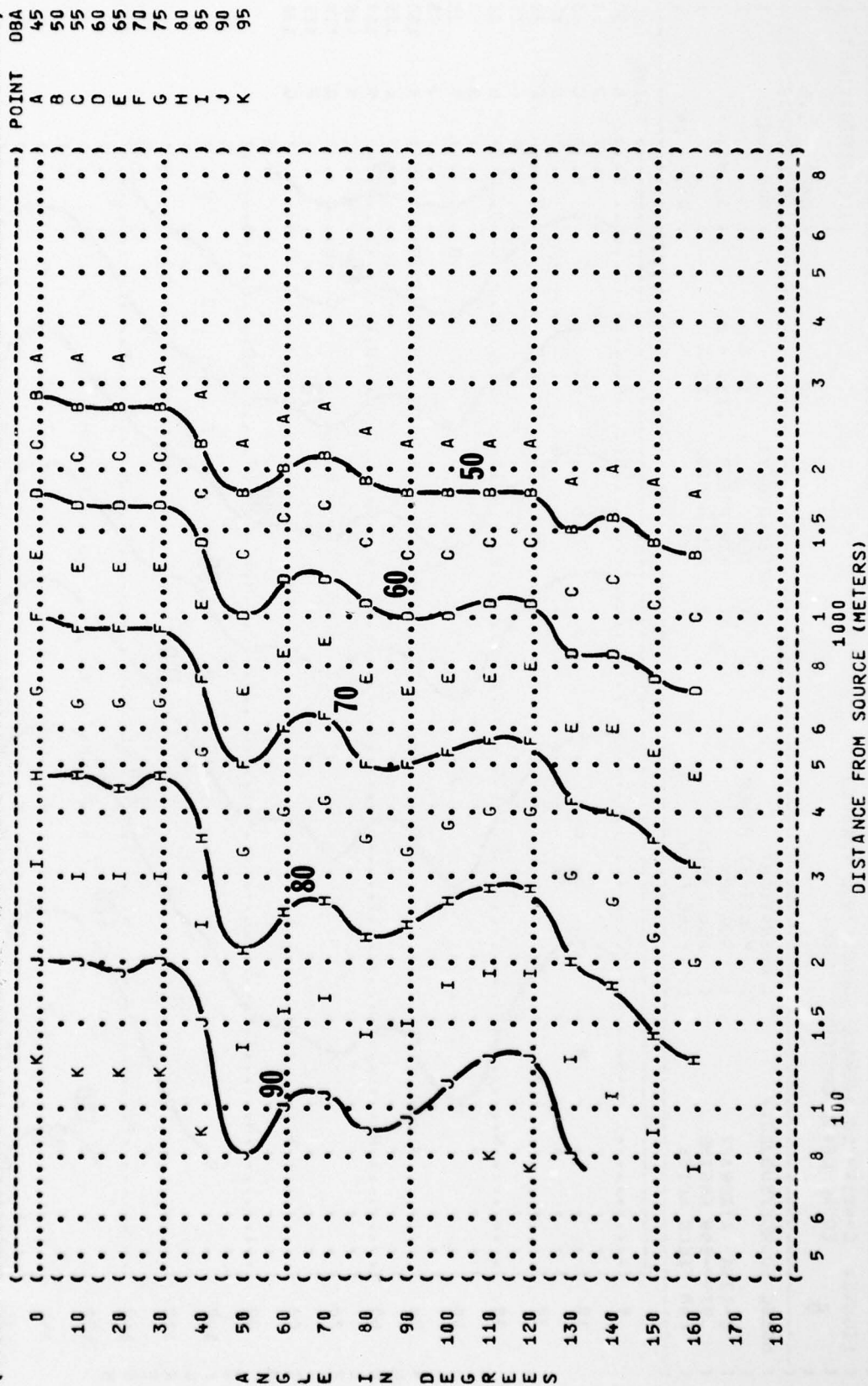


FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 7  
 EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ) IDENTIFICATION: )  
 ( C-135A AIRCRAFT ( IDLE ) TEMP = 15 C )  
 ( J57-P-59W ENGINE ( 63% RPM ) BAR PRESS = .760 M HG )  
 ( FAR FIELD NOISE ( ALL ENGINES ) REL HUMID = 70 % )  
 ( FREE FLOW ) )  
 ( RUN 01 )  
 ( TEST 75-002-023 )  
 ( PAGE 15 )

POINT DBA



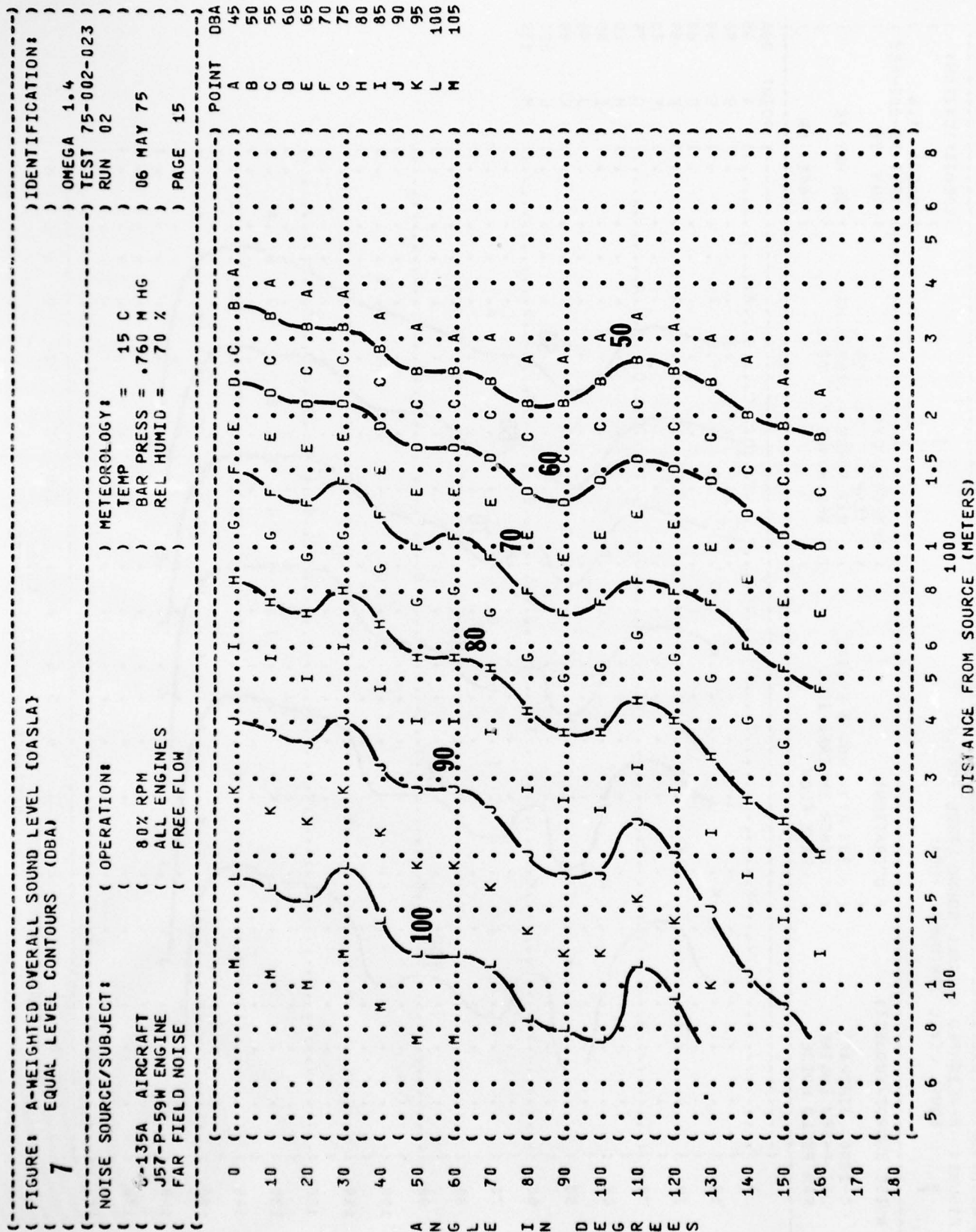
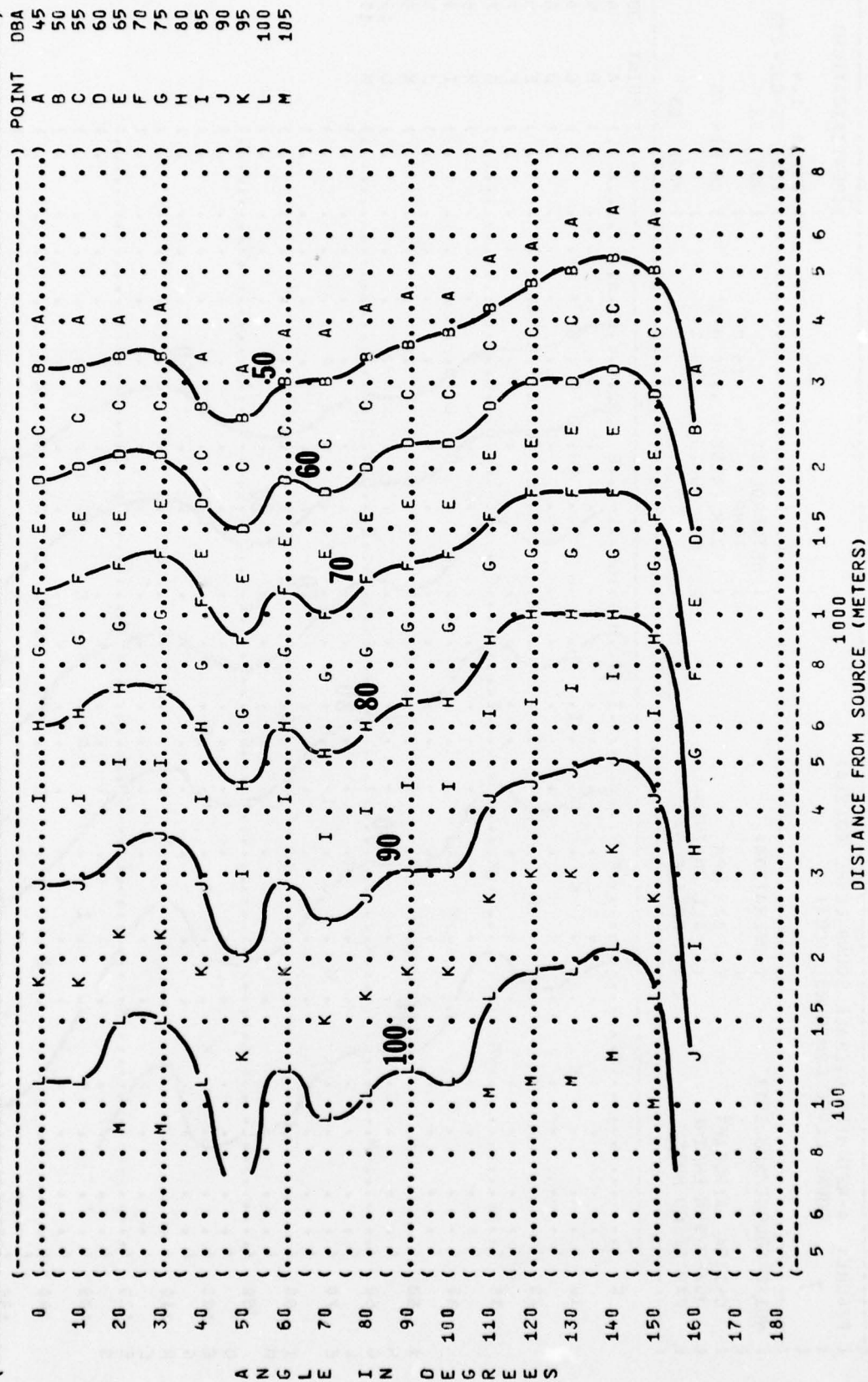
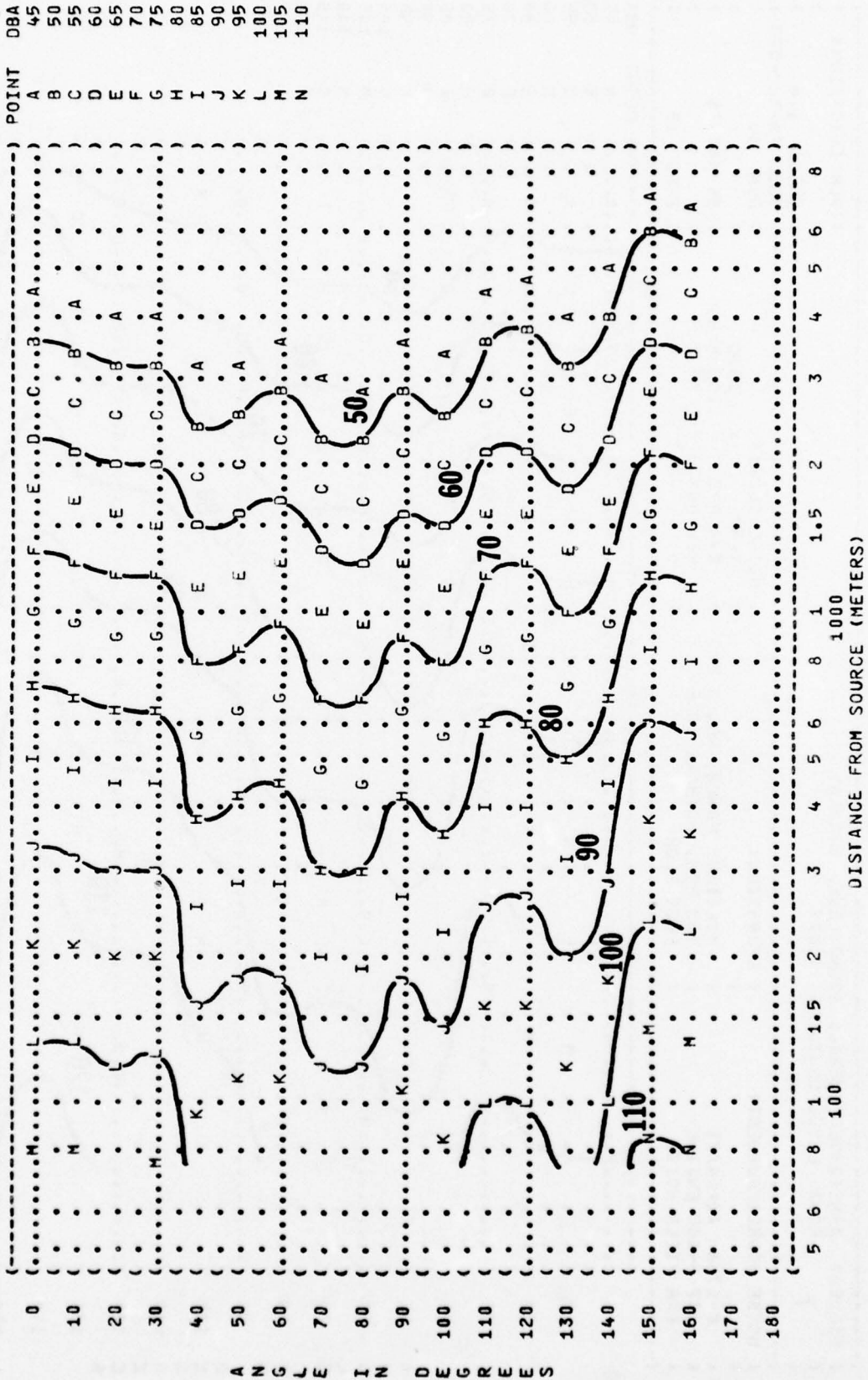




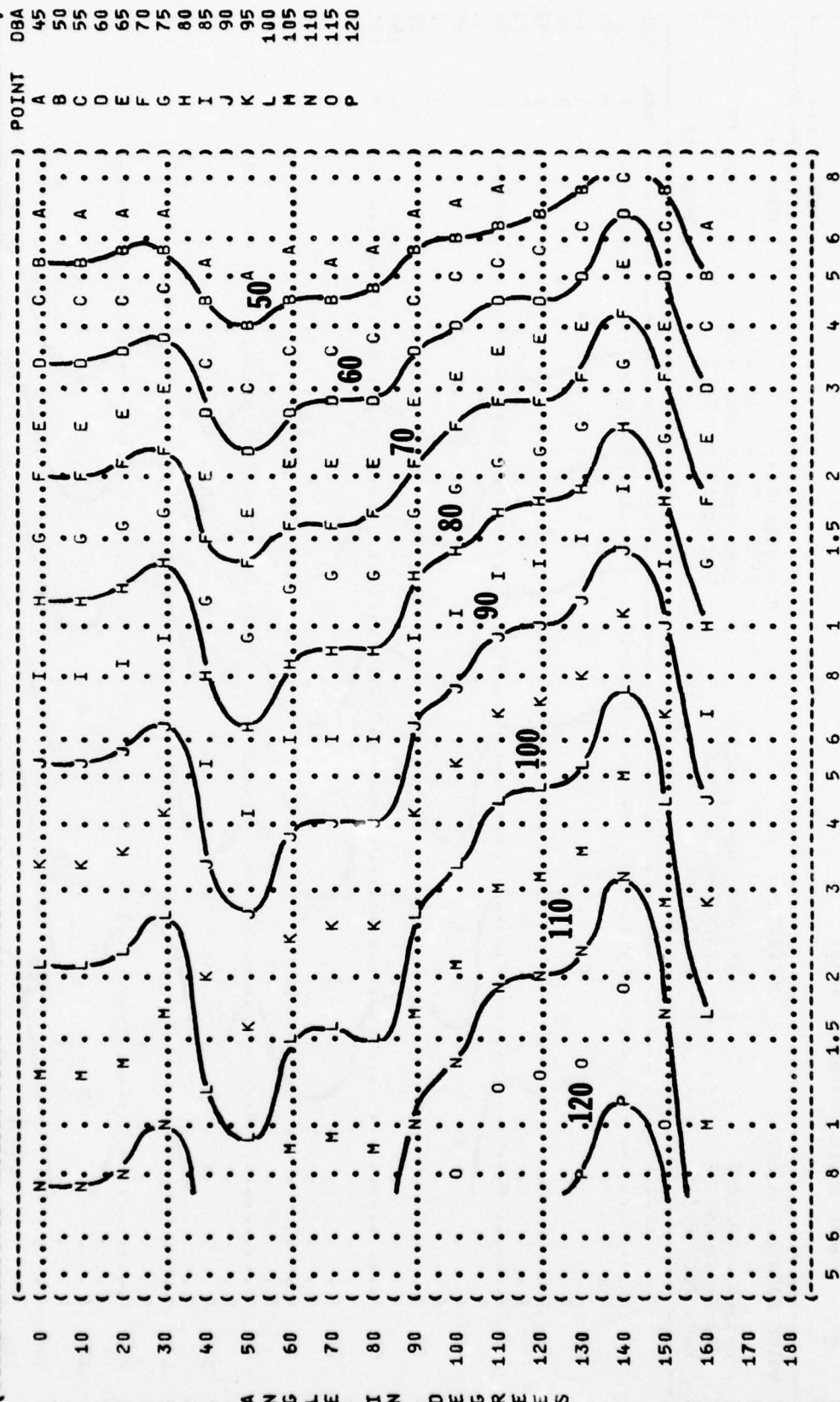
FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 7  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 03  
 NOISE SOURCE/SUBJECT: C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE  
 OPERATION:  
 90% RPM, NO. 3 ENGINE  
 OTHER ENGINES IDLE  
 FREE FLOW  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 PAGE 15



( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) )  
 ( 7 EQUAL LEVEL CONTOURS (DBA) )  
 ( ) IDENTIFICATION: )  
 ( ) OMEGA 1.4 )  
 ( ) TEST 75-002-023 )  
 ( ) RUN 04 )  
 ( ) METEOROLOGY: )  
 ( ) TEMP = 15 C )  
 ( ) BAR PRESS = .760 M HG )  
 ( ) REL HUMID = 70 % )  
 ( ) 06 MAY 75 )  
 ( ) PAGE 15 )  
 ( )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ) OPERATION: )  
 ( ) 90% RPM, NO. 2 ENGINE )  
 ( ) OTHER ENGINES IDLE )  
 ( ) FREE FLOW )  
 ( )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )



( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( EQUAL LEVEL CONTOURS (DBA)  
 ( 7  
 ( IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-023  
 ( ) RUN 05  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) C-135A AIRCRAFT ( MILITARY POWER, NO. 3 ENG ) BAR PRESS = .760 M HG  
 ( ) J57-P-59H ENGINE ( 96% RPM, (OTHERS IDLE) ) REL HUMID = 70 %  
 ( ) FAR FIELD NOISE ( FREE FLOW ) ) PAGE 15







( ( FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION {PNLT} ) IDENTIFICATION: )  
 ( ( 8 EQUAL LEVEL CONTOURS (PNDB) ) )  
 ( ( ) OMEGA 1.4 )  
 ( ( TEST 75-002-023 )  
 ( ( RUN 01 )  
 ( ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( ( ) IDLE ) TEMP = 15 C )  
 ( ( C-135A AIRCRAFT ) 63% RPM ) BAR PRESS = .760 M HG )  
 ( ( J57-P-59W ENGINE ) ALL ENGINES ) REL HUMID = 70 % )  
 ( ( FAR FIELD NOISE ) FREE FLOW ) )  
 ( ( ) PAGE 16 )

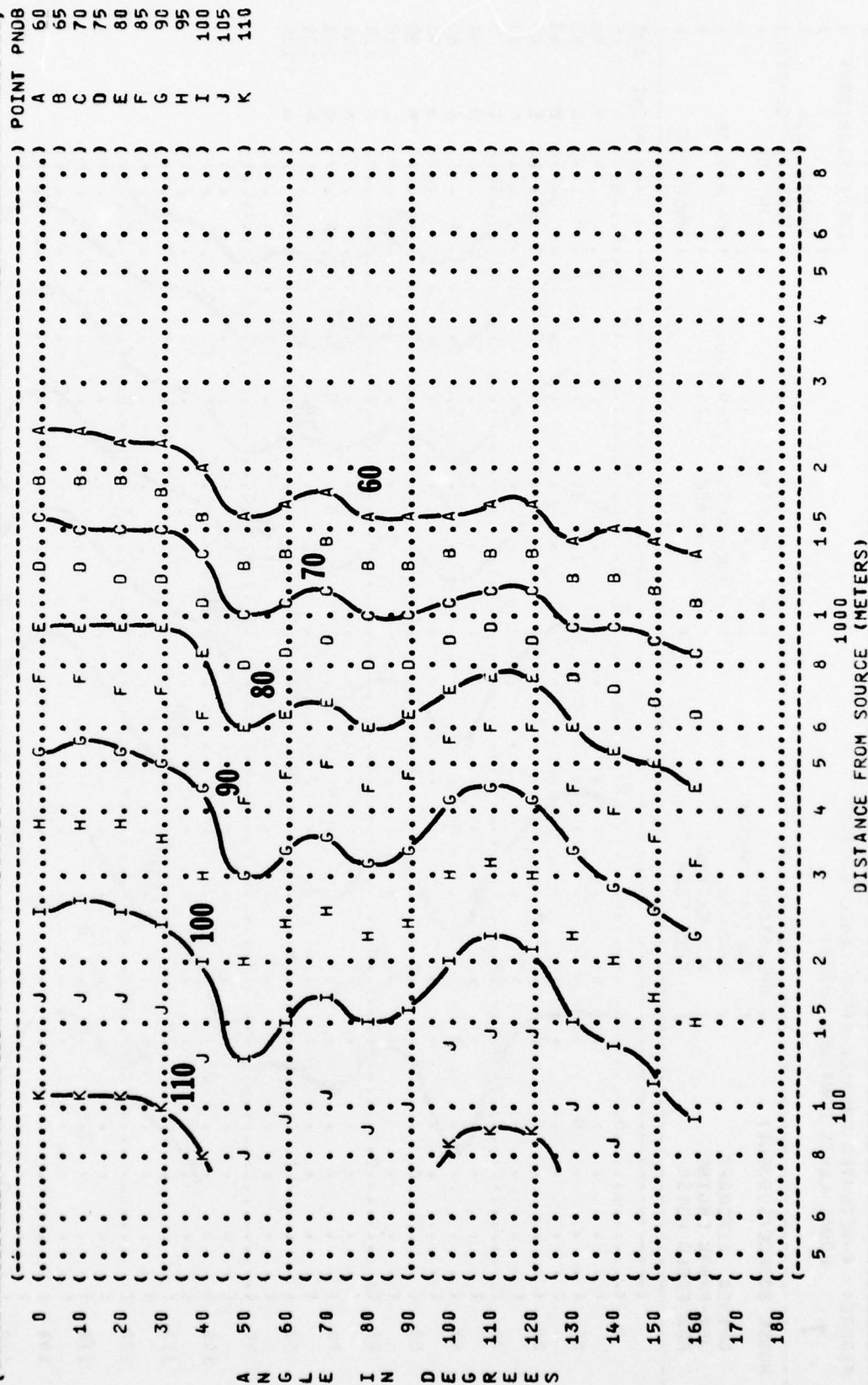
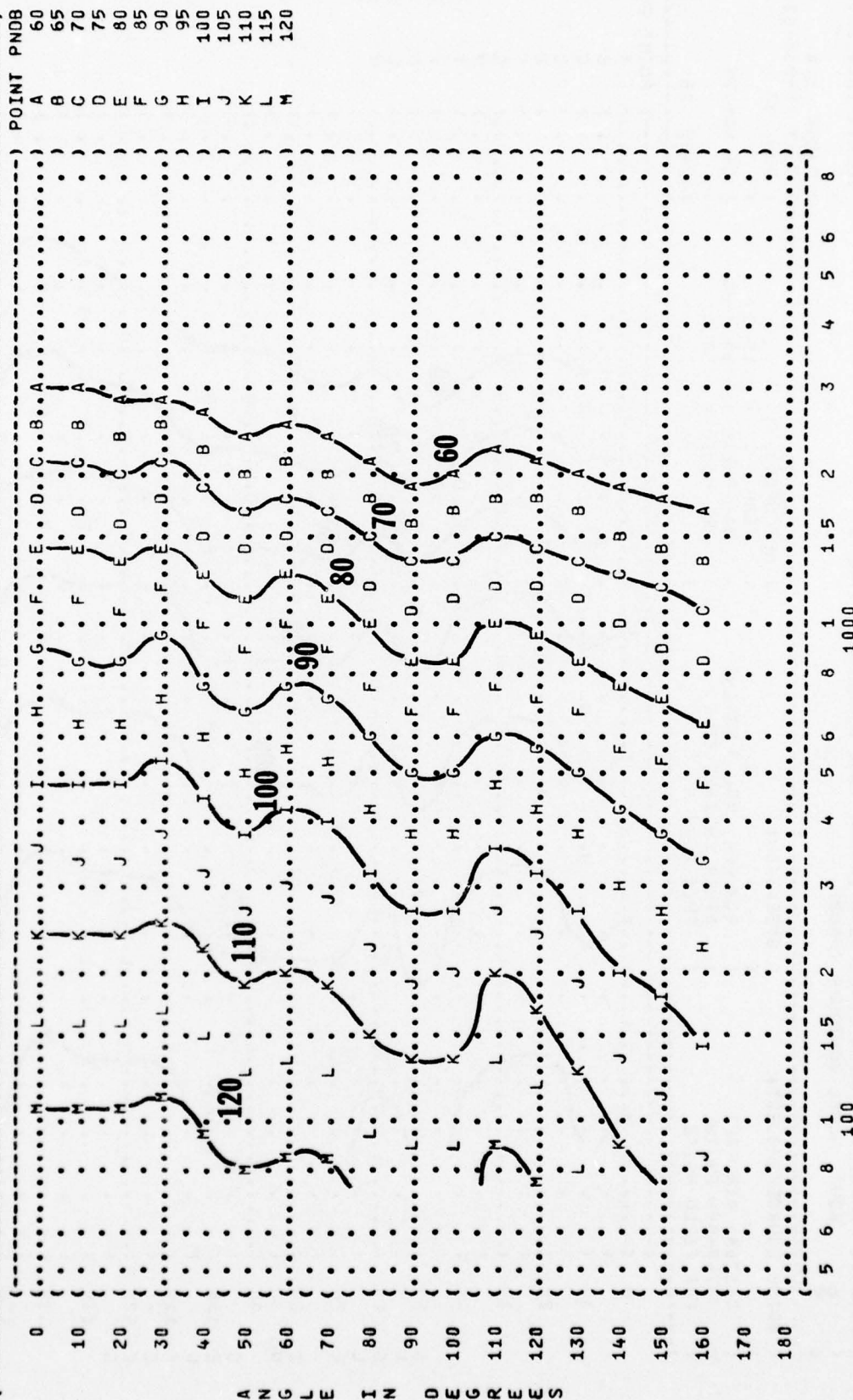


FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION {PNLT}  
 8  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 02  
 06 MAY 75  
 PAGE 16

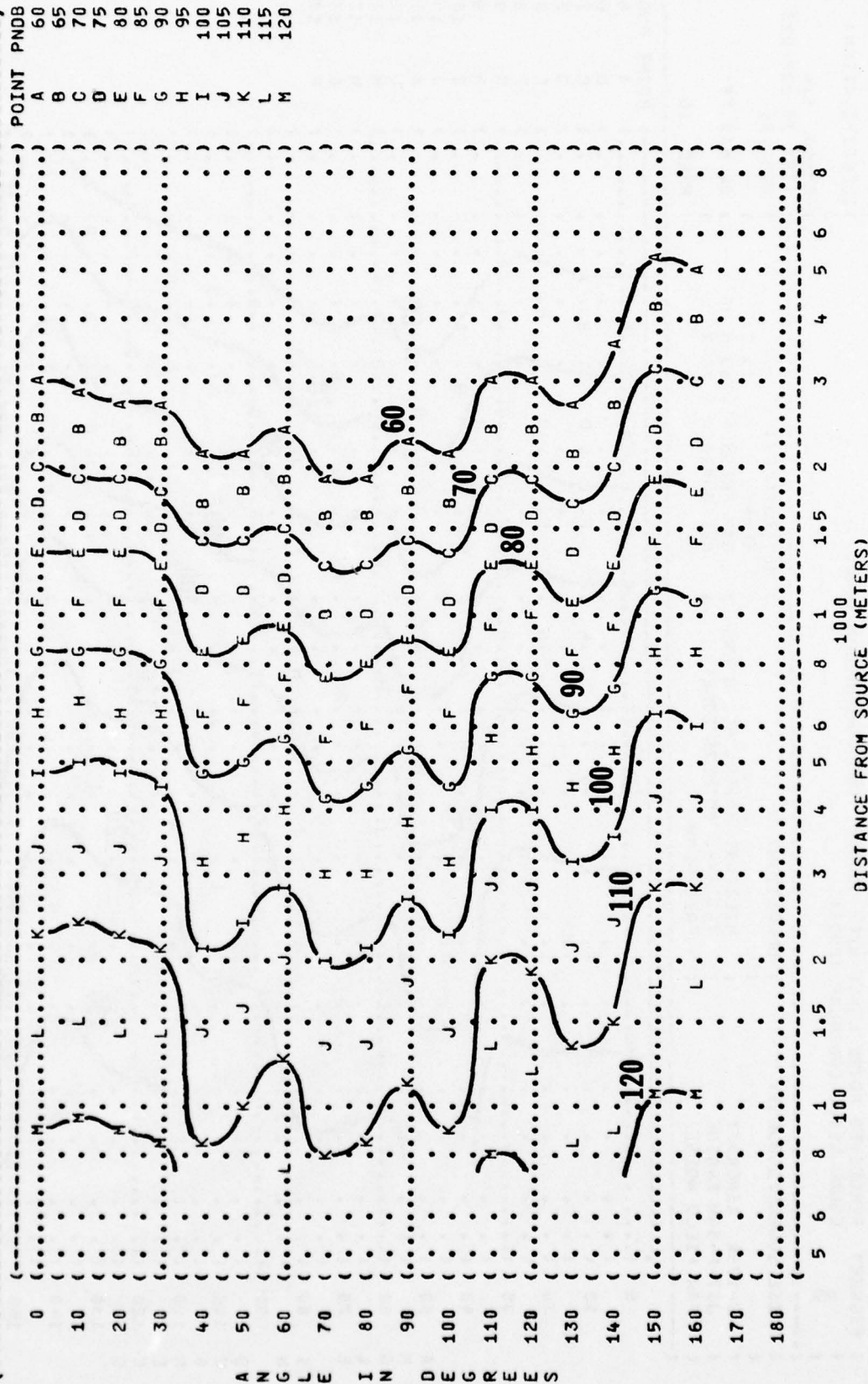
NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 C-135A AIRCRAFT ( 80% RPM ) TEMP = 15 C  
 J57-P-59W ENGINE ( ALL ENGINES ) BAR PRESS = .760 M HG  
 FAR FIELD NOISE ( FREE FLOW ) REL HUMID = 70 %







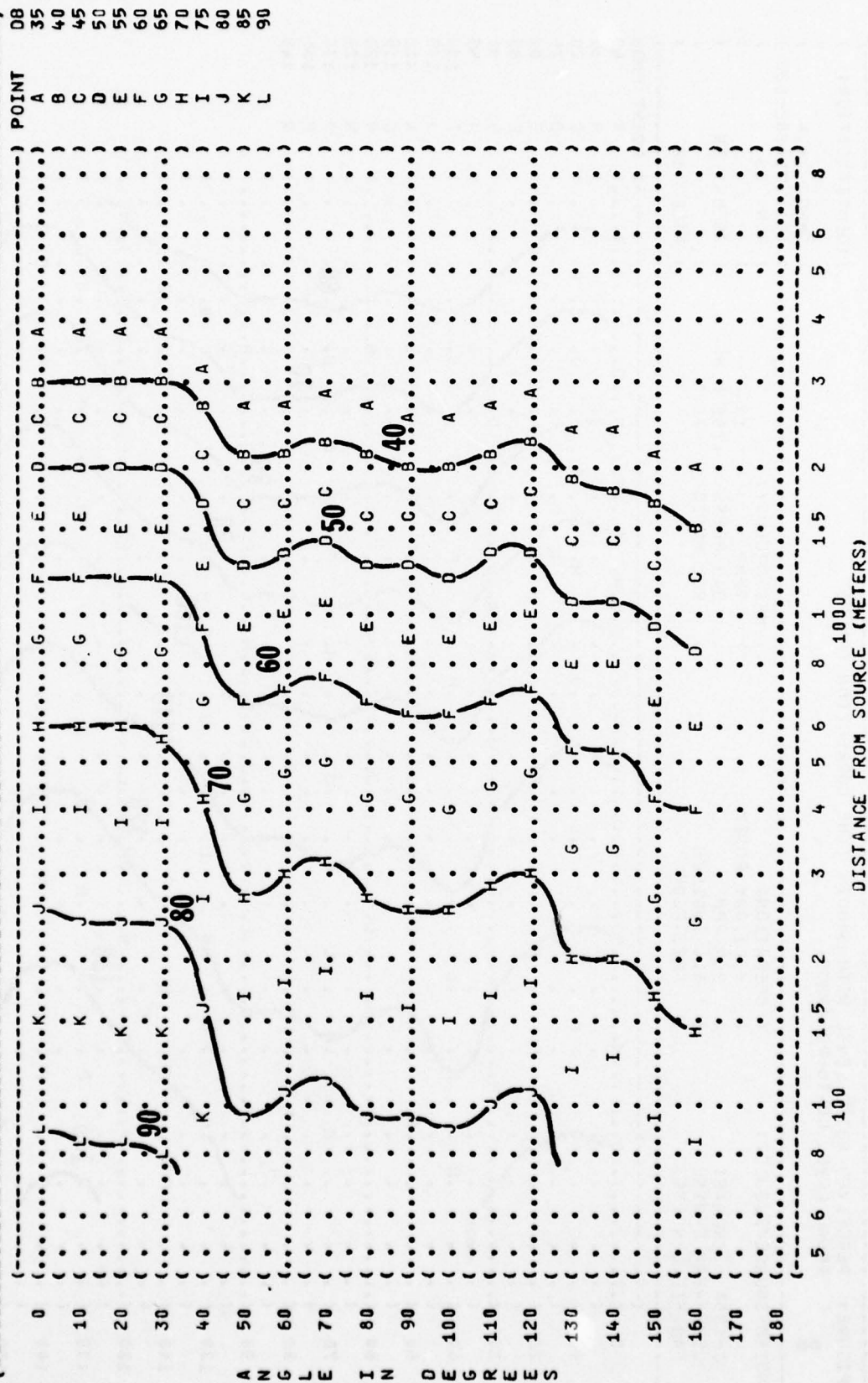
( FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)  
 ( 8 EQUAL LEVEL CONTOURS (PNDB)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-023  
 ( ) RUN 04  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) 90% RPM, NO. 2 ENGINE BAR PRESS = .760 M HG  
 ( ) J57-P-59M ENGINE OTHER ENGINES IDLE REL HUMID = 70 %  
 ( ) FAR FIELD NOISE FREE FLOW ) PAGE 16

















( FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 ( 9  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( ) IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-023  
 ( ) RUN 04  
 ( )  
 ( NOISE SOURCE/SUBJECT: ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) 90% RPM, NO. 2 ENGINE ) BAR PRESS = .760 M HG  
 ( ) OTHER ENGINES IDLE ) REL HUMID = 70 %  
 ( ) FREE FLOW )  
 ( ) PAGE 17  
 ( )

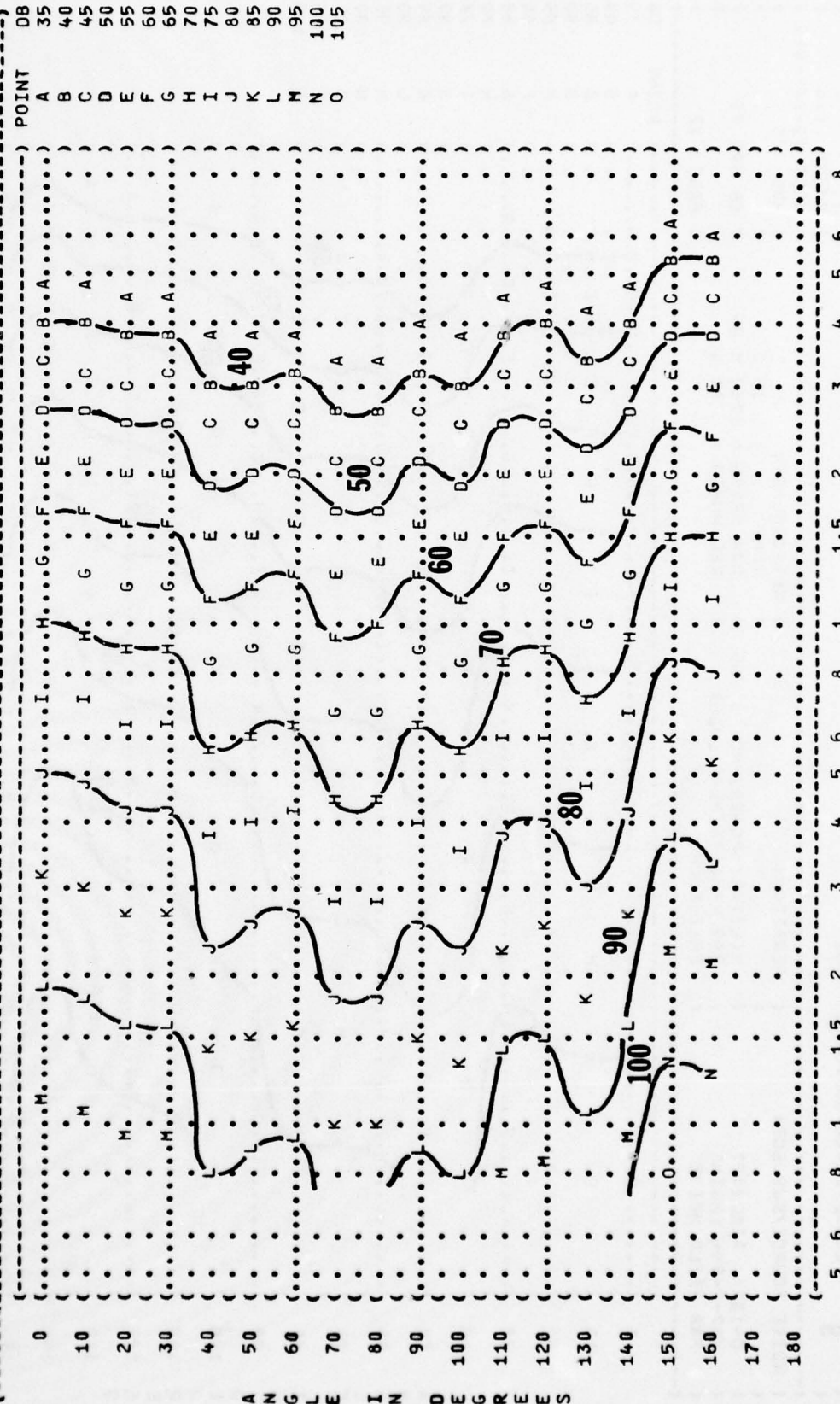
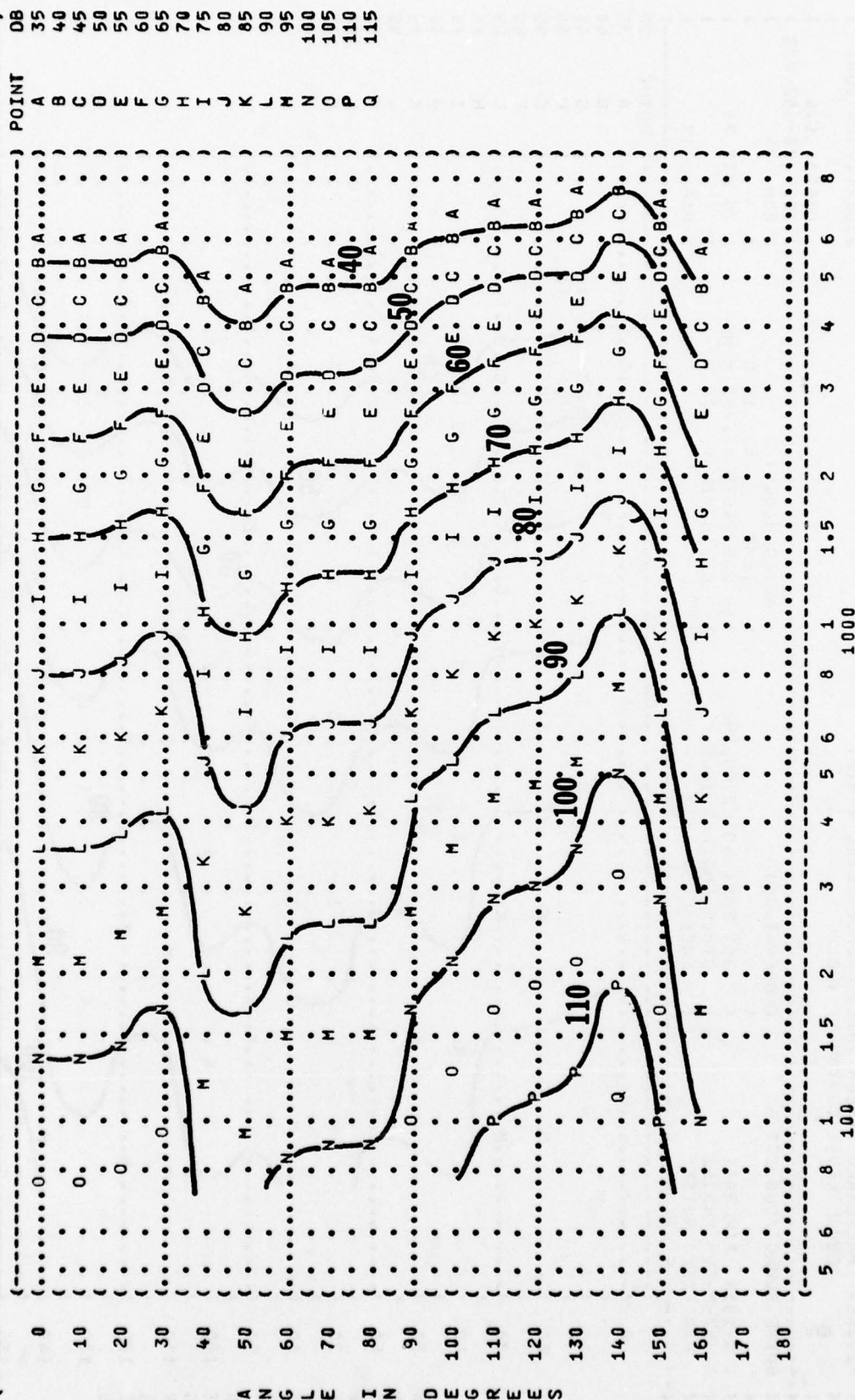


FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 9  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 05  
 NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: TEMP = 15 C  
 C-135A AIRCRAFT ( MILITARY POWER, NO. 3 ENG ) BAR PRESS = .760 M HG  
 J57-P-59H ENGINE ( 96% RPM, (OTHERS IDLE) ) REL HUMID = 70 %  
 FAR FIELD NOISE ( FREE FLOW ) PAGE 17





( FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) )  
 ( QUAL LEVEL CONTOURS (DB) )  
 ( 9 )  
 ( NOISE SOURCE/SUBJECT: )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( MILITARY POWER )  
 ( 96% RPM )  
 ( ALL ENGINES )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 06 )  
 ( 06 MAY 75 )  
 ( PAGE 17 )

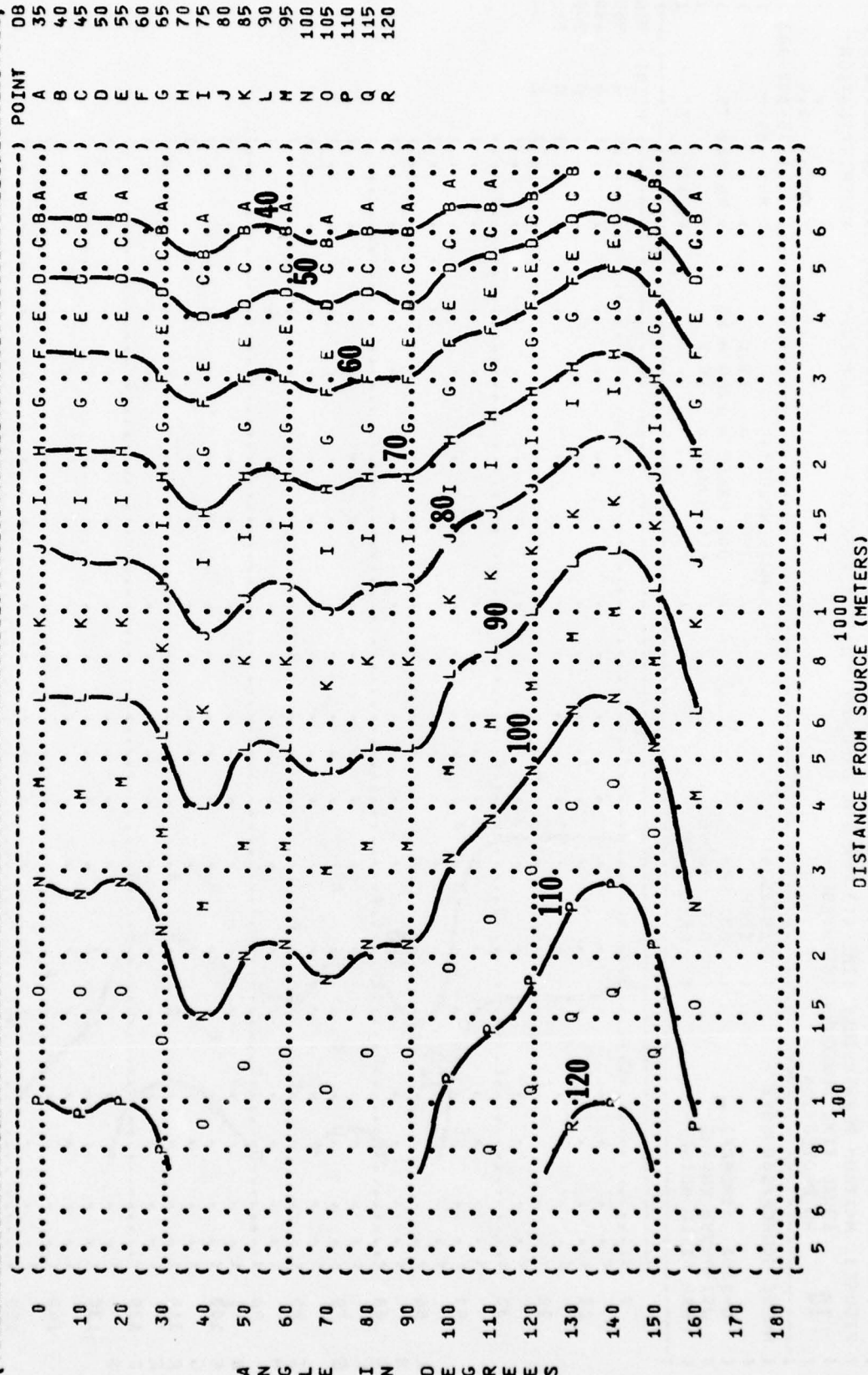
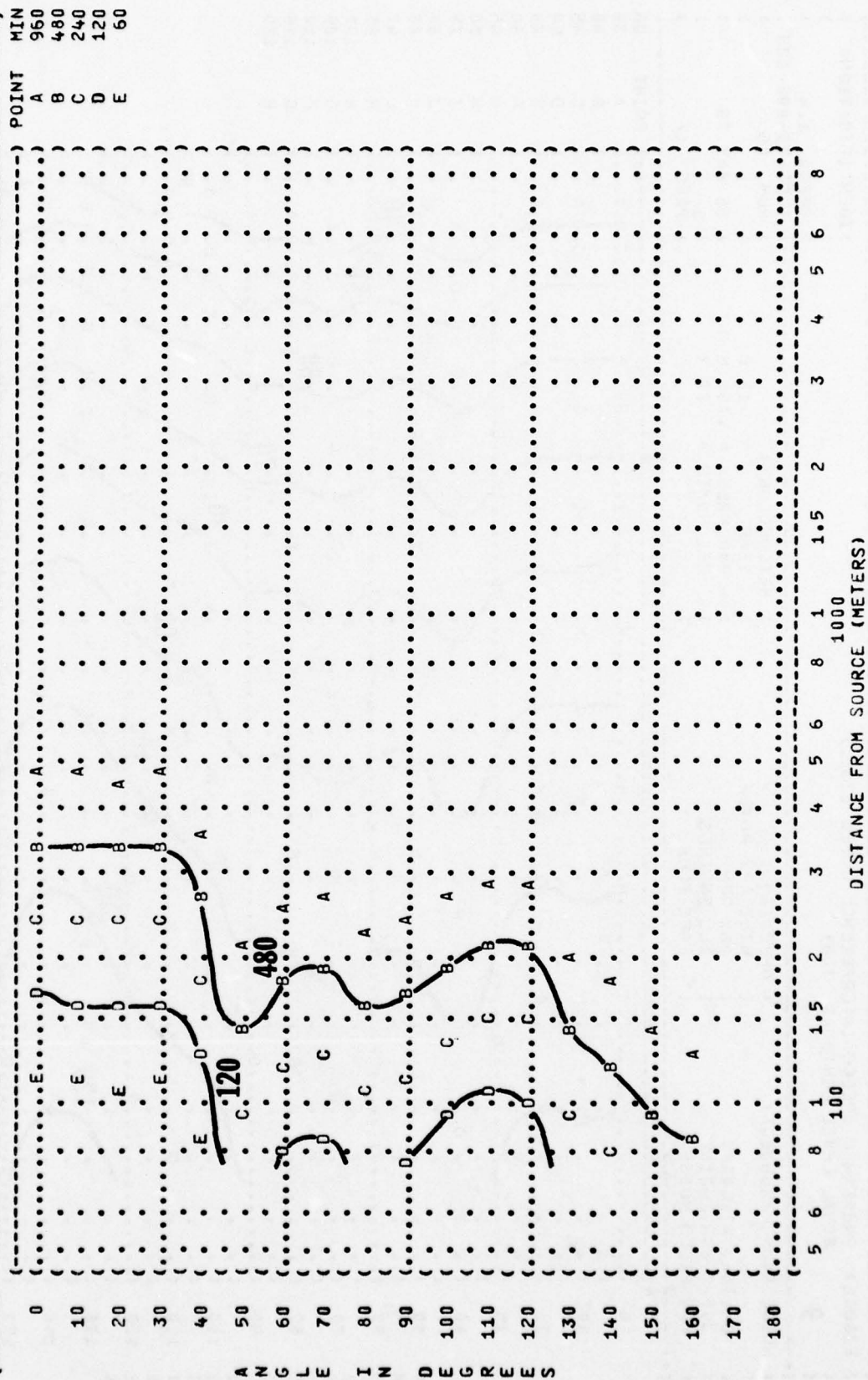


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) IDENTIFICATION:  
 10 EQUAL TIME CONTOURS (MINUTES)  
 NO PROTECTION  
 NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY: TEMPERATURE = 15 C  
 C-135A AIRCRAFT ( IDLE )  
 J57-P-59W ENGINE ( 63% RPM ) BAR PRESS = .760 M HG  
 FAR FIELD NOISE ( ALL ENGINES ) REL HUMID = 70 %  
 ( FREE FLOW )  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 01  
 06 MAY 75  
 PAGE 7



10

0	A
10	N
20	G
30	L
40	E
50	I
60	N
70	D
80	E
90	G
100	R
110	E
120	E
130	S
140	
150	
160	
170	
180	

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY  
AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS  
FOR ALL ANGLES EVALUATED (INDICATED BY  $\angle$  AT LEFT)

**UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:**

MINIMUM QPL EAR MUFFS

AMERICAN OPTICAL 1700 EAR MUFFS

V-51R EAR PLUGS

COMFIT TRIPLE FLANGE EAR PLUGS

H-133 GROUND COMMUNICATION UNIT

DISTANCE FROM SOURCE (METERS)

DISTANCE FROM SOURCE (METERS)







POINT	MIN
A	960
B	480

480

MIN

POINT

A

B

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

1000  
DISTANCE FROM SOURCE (METERS)



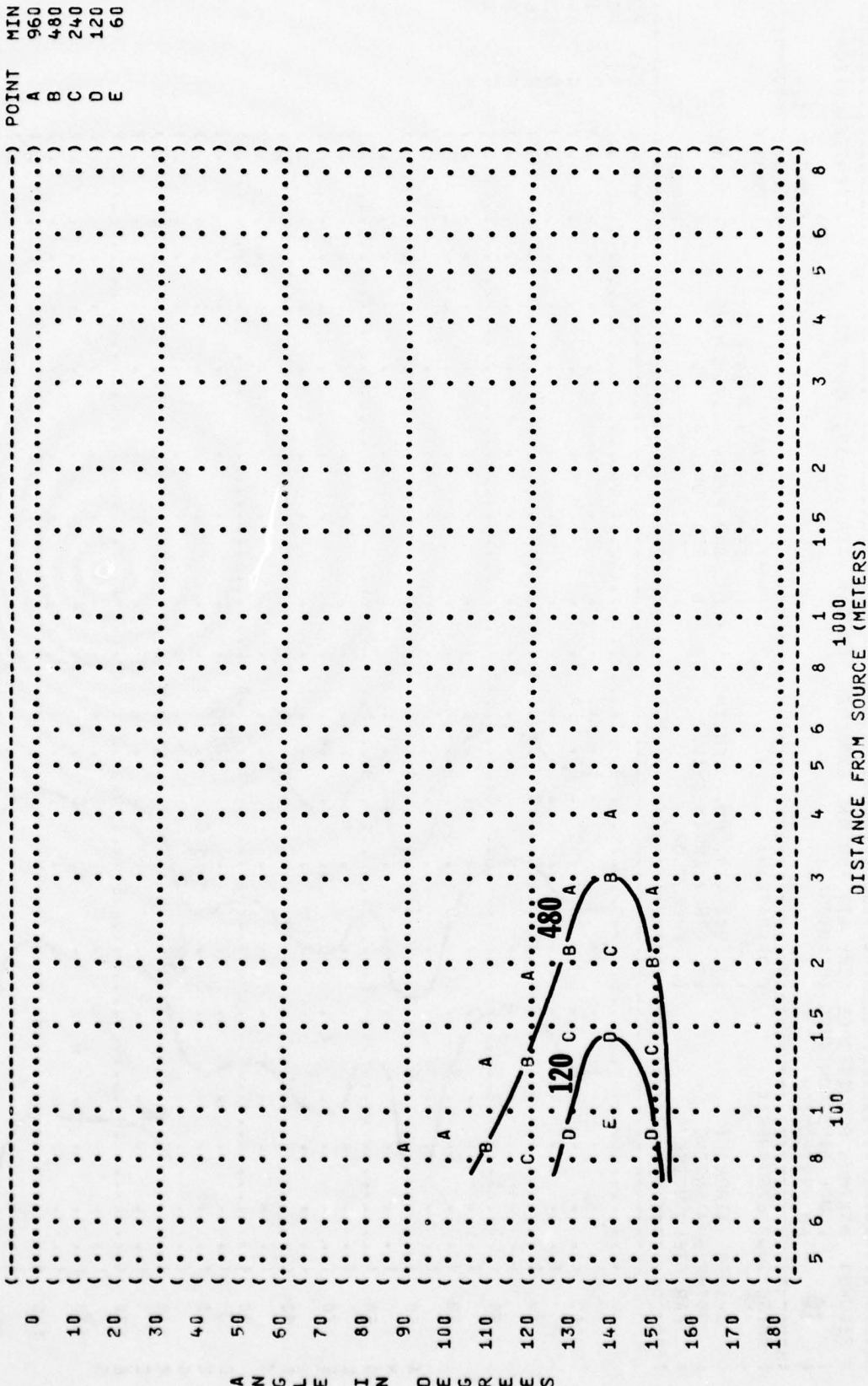








( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (APR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( ) EQUAL TIME CONTOURS (MINUTES) )  
 ( 10 MINIMUM QPL EAR MUFFS )  
 ( ) NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( ) C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE ) TEMP = 15 C )  
 ( ) J57-P-59W ENGINE ( OTHER ENGINES IDLE ) BAR PRESS = .760 M HG )  
 ( ) FAR FIELD NOISE ( FREE FLOW ) REL HUMID = 70 % )  
 ( ) TEST 75-002-023 )  
 ( ) RUN 03 )  
 ( ) 06 MAY 75 )  
 ( ) PAGE 8 )









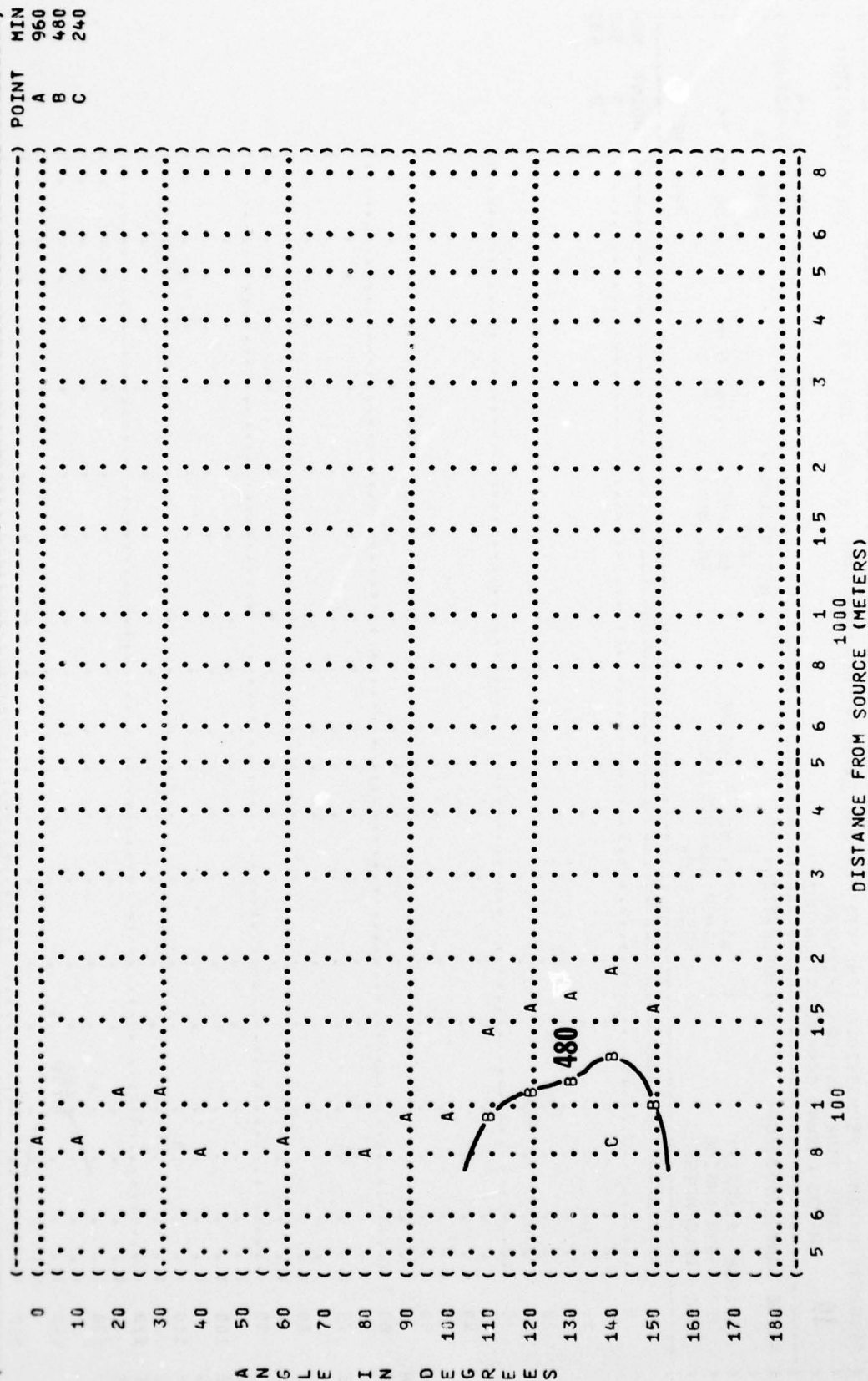




FIGURE	MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)	IDENTIFICATION
10	EQUAL TIME CONTOURS (MINUTES)	
	NO PROTECTION	OMEGA 1.4
		TEST 75-002-023
		RUN 04
NOISE SOURCE/SUBJECT	OPERATION	METEOROLOGY
		TEMP = 15 C
C-135A AIRCRAFT	90% RPM, NO. 2 ENGINE	BAR PRESS = .760 M HG
J57-P-59W ENGINE	OTHER ENGINES IDLE	REL HUMID = 70 %
FAR FIELD NOISE	FREE FLOW	
		PAGE 7

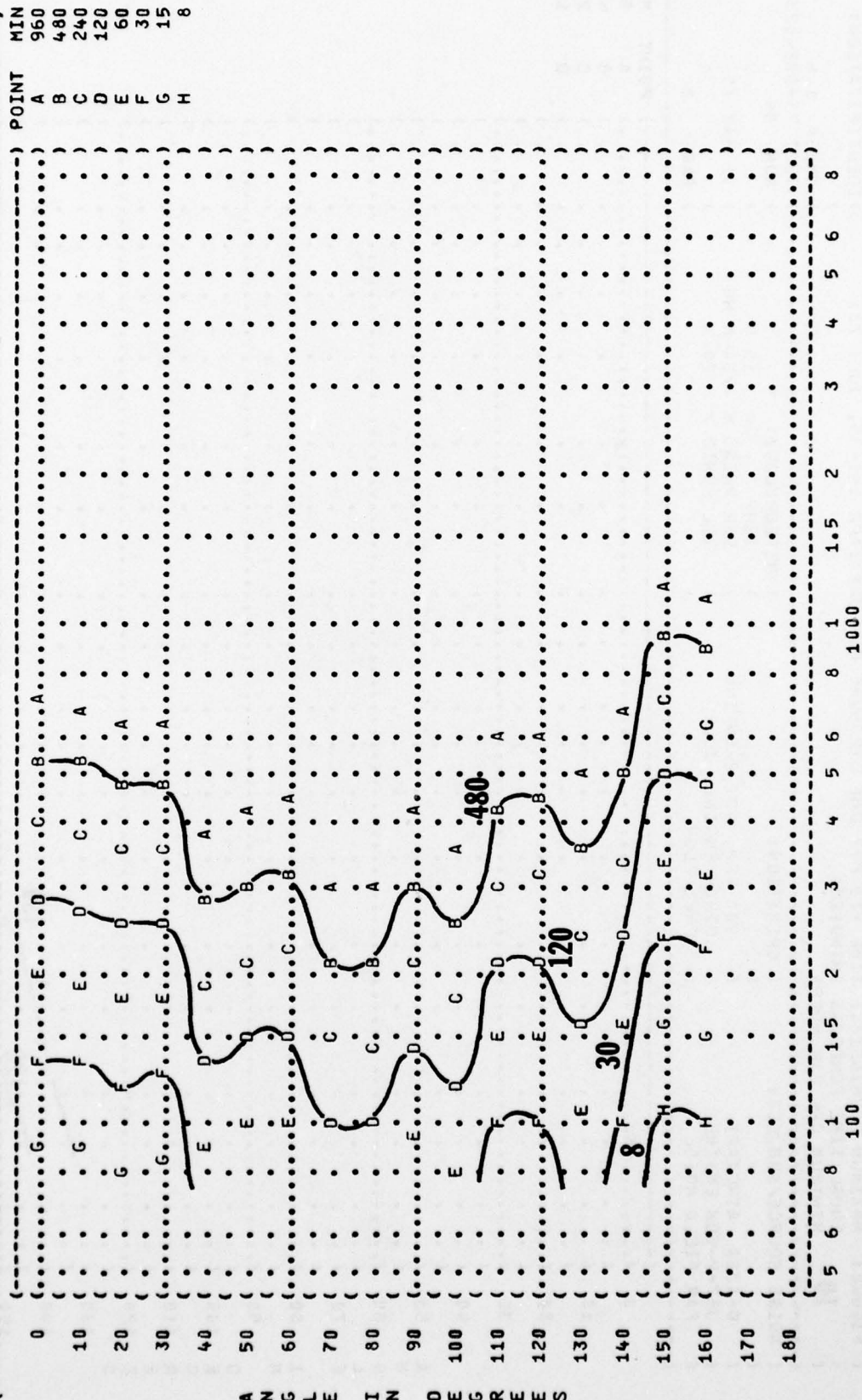








FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)		IDENTIFICATION:	
EQUAL TIME CONTOURS (MINUTES)			
10 V-51R EAR PLUGS		OMEGA 1.4	
		TEST 75-002-023	
NOISE SOURCE/SUBJECT:		RUN 04	
( OPERATION:		METEOROLOGY:	
( ( 90% RPM, NO. 2 ENGINE		TEMP = 15 C	
( ( OTHER ENGINES IDLE		BAR PRESS = .760 M HG	
( ( FREE FLOW		REL HUMID = 70 %	
		PAGE 10	
		POINT MIN	
		A 960	
		B 480	
0			
10			
20			
30			
40			
50			
60			
70			
80			
90			
100			
110			
120			
130			
140			
150			
160			
170			
180			

A N G L E I N D E G R E E S

DISTANCE FROM SOURCE (METERS)



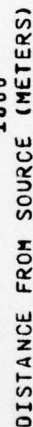


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)										IDENTIFICATION:	
EQUAL TIME CONTOURS (MINUTES)											
H-133 GROUND COMMUNICATION UNIT										OMEGA 1.4	
NOISE SOURCE/SUBJECT:										TEST 75-002-023	
( OPERATION:										RUN 04	
( METEOROLOGY:											
( TEMP = 15 C											
( 90% RPM, NO. 2 ENGINE											
( OTHER ENGINES IDLE										06 MAY 75	
( FREE FLOW										PAGE 12	
										POINT MIN	
										A 960	
										B 480	
0											
10											
20											
30											
40											
50											
60											
70											
80											
90											
100											
110											
120											
130											
140											
150											
160											
170											
180											

ANGLES IN DEGREES

DISTANCE FROM SOURCE (METERS)

INT	MIN
A	960
B	480
C	240
D	120
E	60
F	30
G	15
H	8
I	4
J	2.2



87











FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10

CONFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:

OPERATION:

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

C-135A AIRCRAFT

MILITARY POWER, NO. 3 ENG

J57-P-59W ENGINE

96% RPM, (OTHERS IDLE)

FAR FIELD NOISE

FREE FLOW

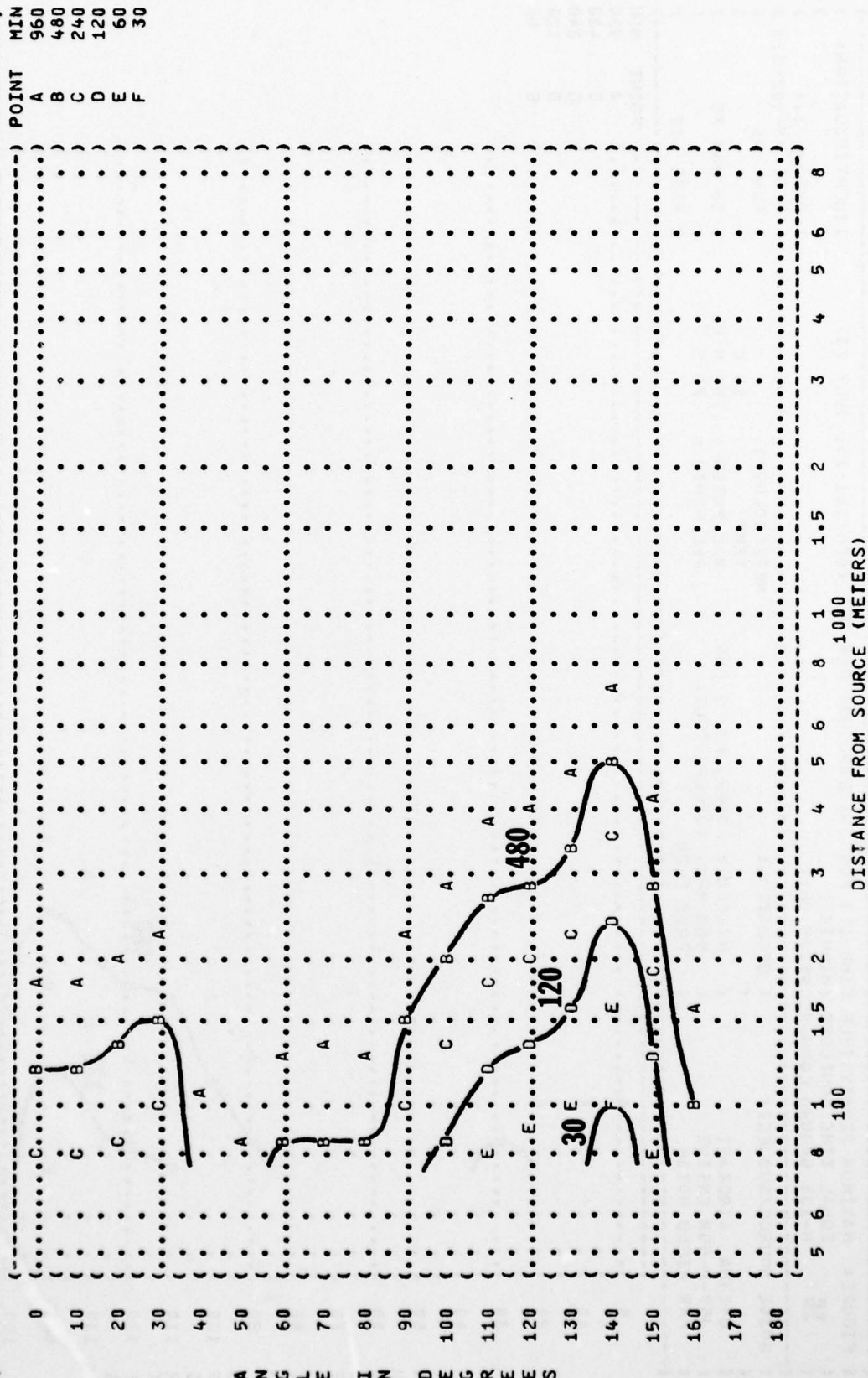
06 MAY 75

PAGE 11

OMEGA 1.4

TEST 75-002-023

RUN 05





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AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 1/2  
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 83. KC-135A A--ETC(U)  
DEC 77 R G POWELL

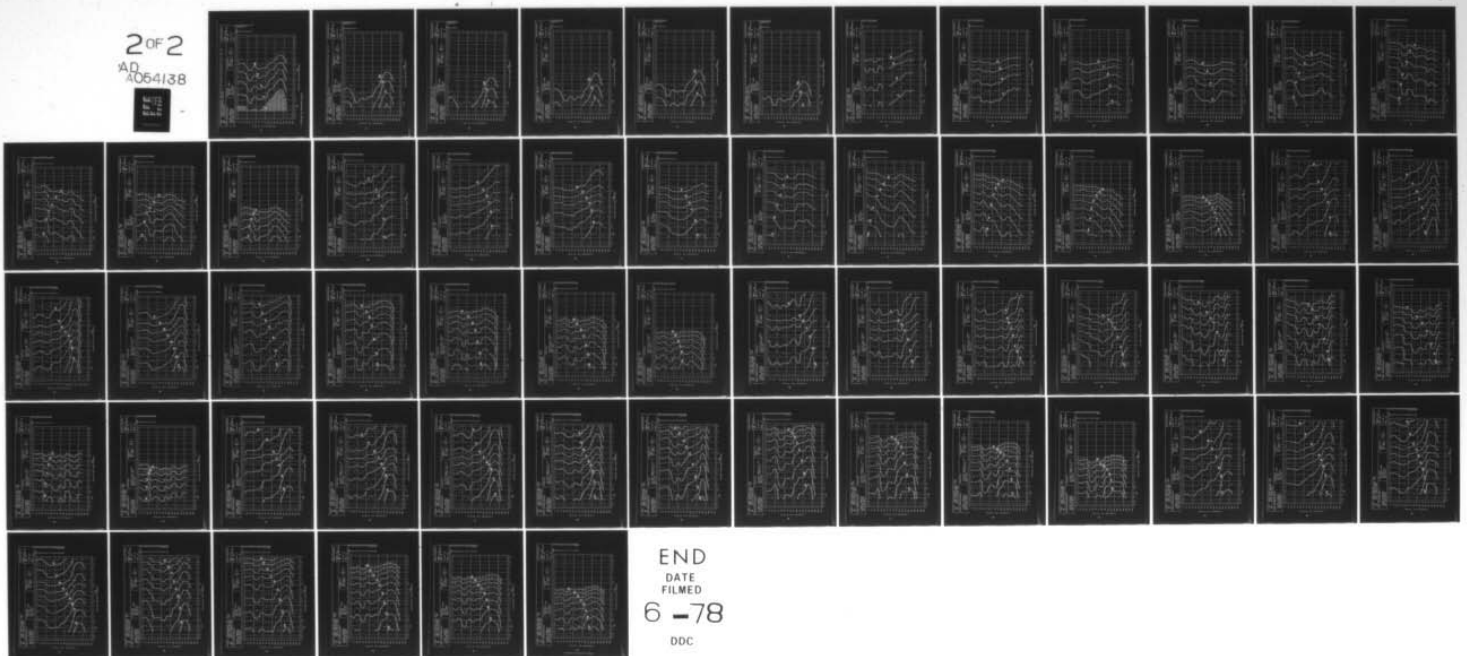
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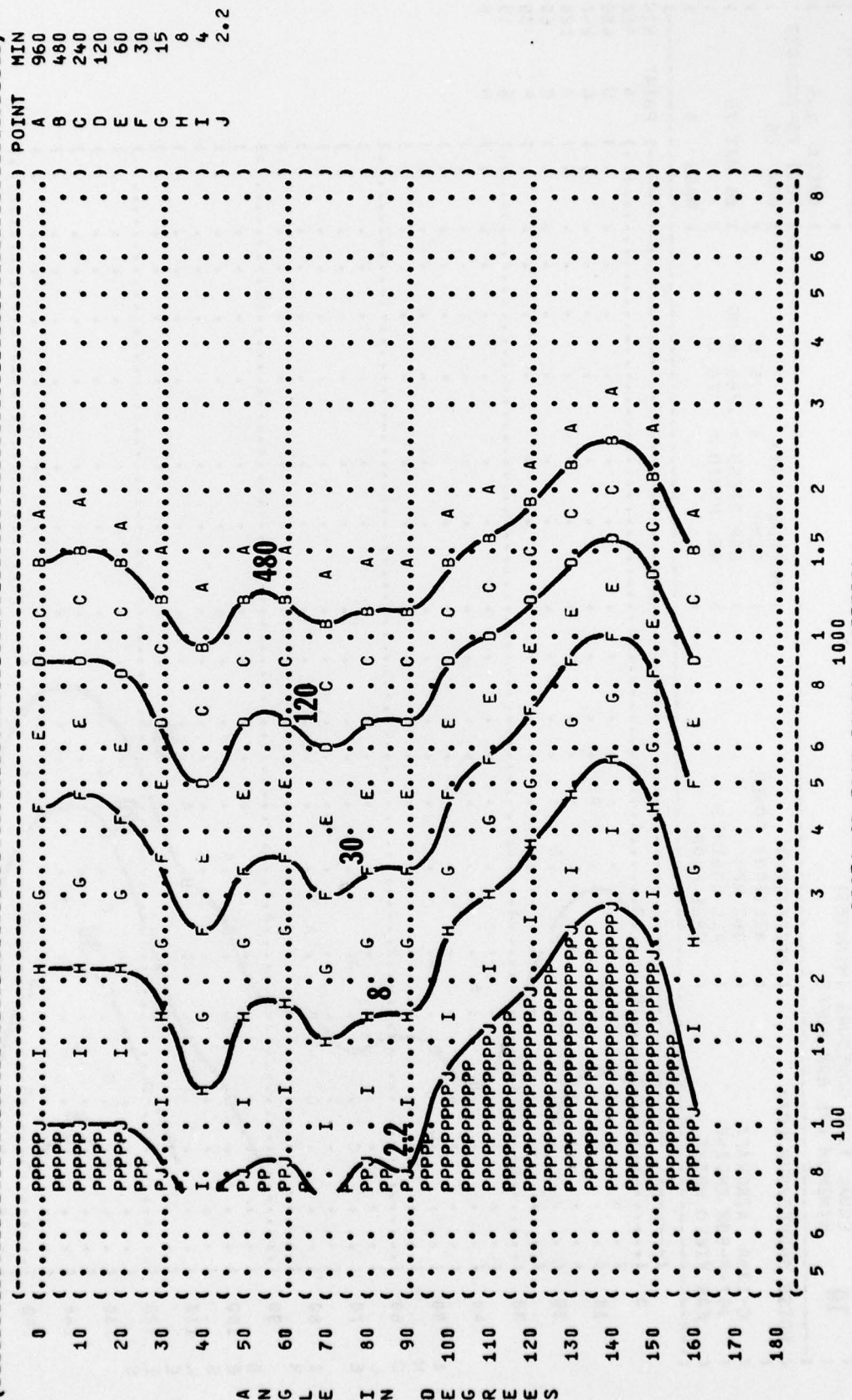


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10 NO PROTECTION

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: OMEGA 1.4  
 ( MILITARY POWER ) TEMP = 15 C  
 ( C-135A AIRCRAFT ) 96% RPM ) BAR PRESS = .760 M HG  
 ( J57-P-59W ENGINE ) ( ALL ENGINES ) REL HUMID = 70 %  
 ( FAR FIELD NOISE ) ( FREE FLOW ) ) PAGE 7



P ADDITIONAL EAR PROTECTION REQUIRED.

(		) IDENTIFICATION :	
(	FIGURE : MAXIMUM PERMISSIBLE TIME {T} FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)		)
(	EQUAL TIME CONTOURS (MINUTES)		)
(	<b>10</b>		) OMEGA     1.4
(	MINIMUM QPL EAR MUFFS		) TEST 75-002-023
(			) RUN       06
(	NOISE SOURCE/SUBJECT:	METEOROLOGY :	)
(	( MILITARY POWER ) TEMP = 15 C		)
(	( 96% RPM ) BAR PRESS = .760 M HG		)
(	( ALL ENGINES ) REL HUMID = 70 %		)
(	( FREE FLOW ) PAGE     8		)
(	C-135A AIRCRAFT		)
(	J57-P-59W ENGINE		)
(	FAR FIELD NOISE		)

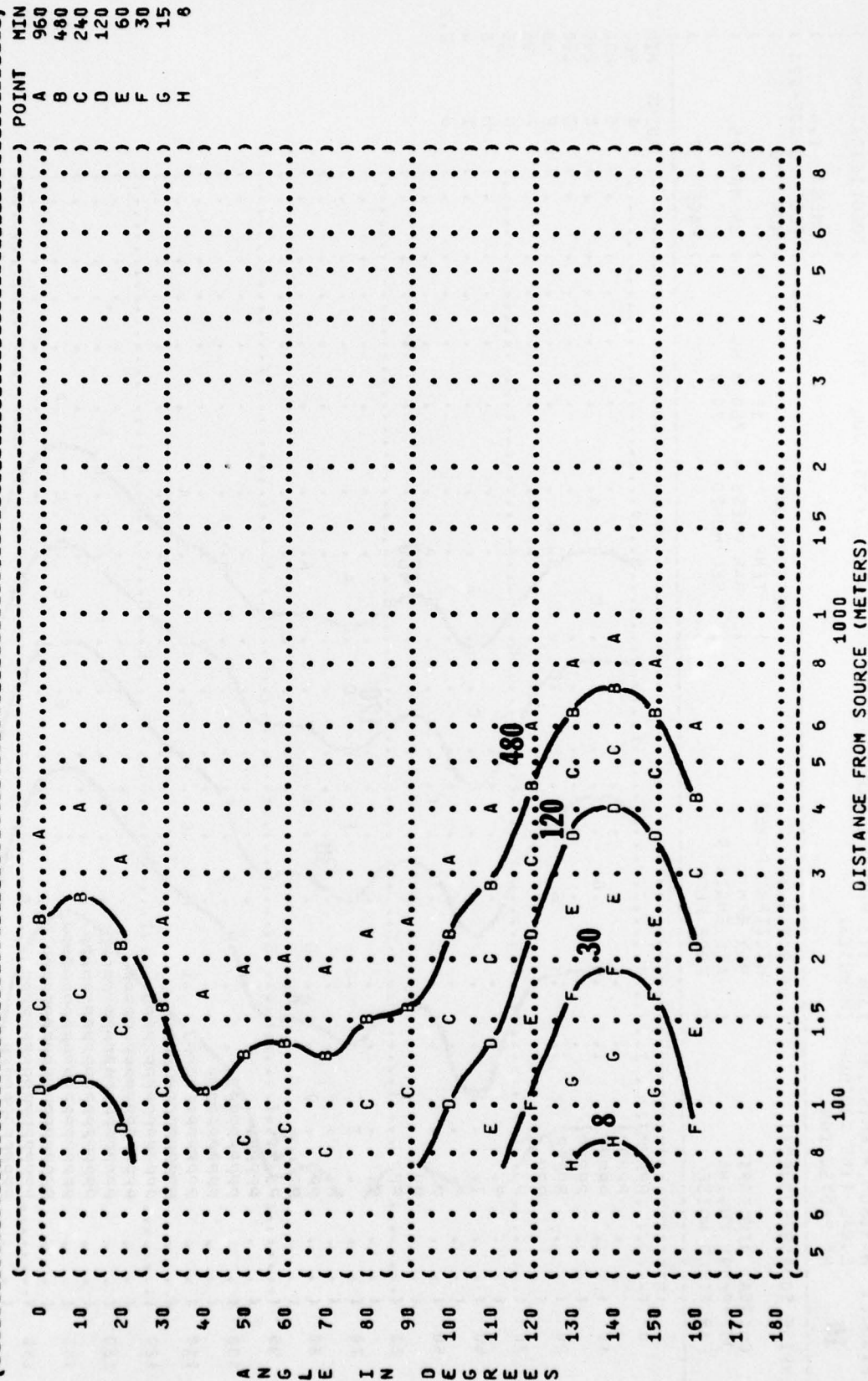


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10  
EQUAL TIME CONTOURS (MINUTES)  
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:

OPERATION: MILITARY POWER

C-135A AIRCRAFT

J57-P-59W ENGINE

FAR FIELD NOISE

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

OMEGA 1.4

TEST 75-002-023

RUN 06

06 MAY 75

PAGE 9

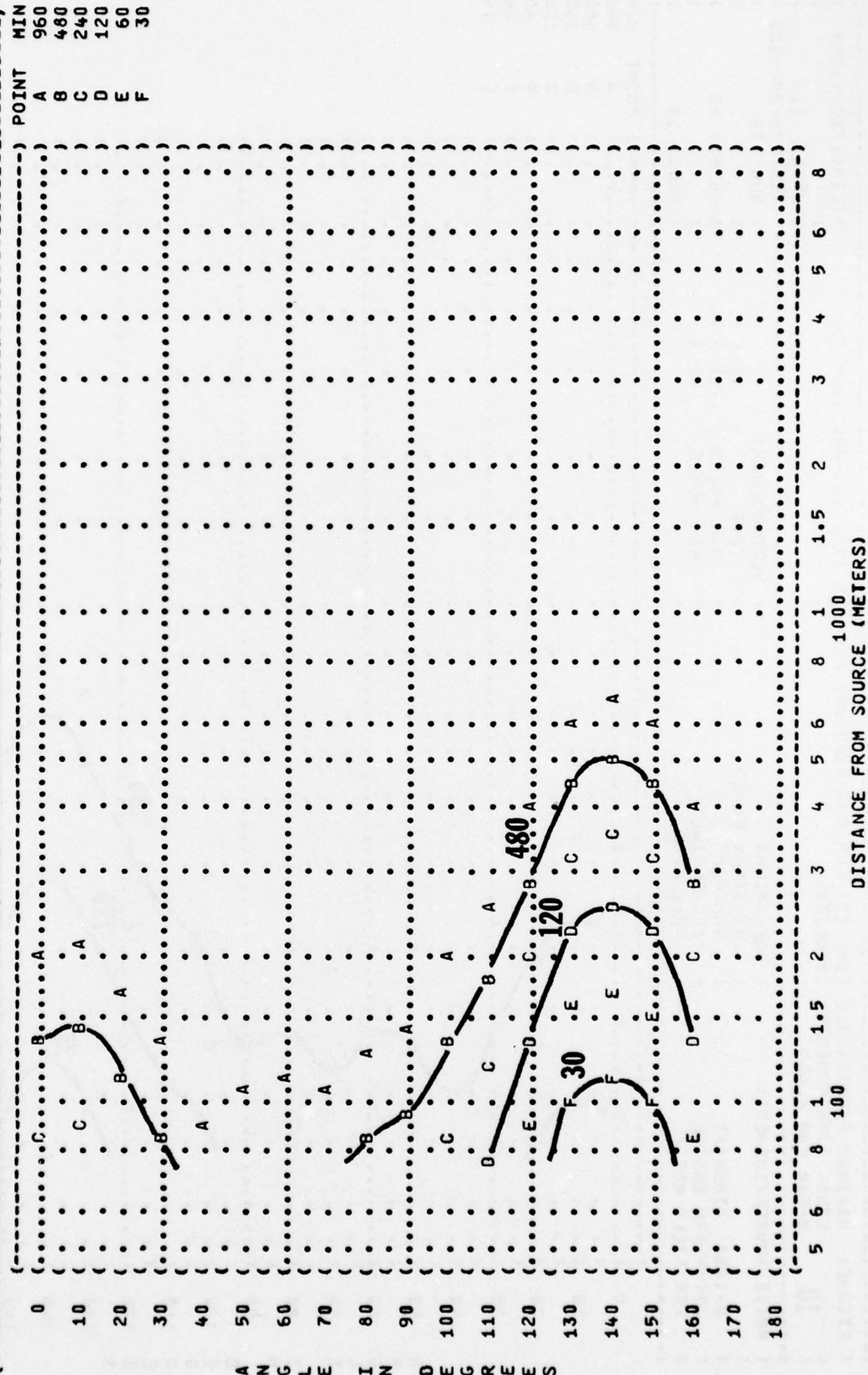


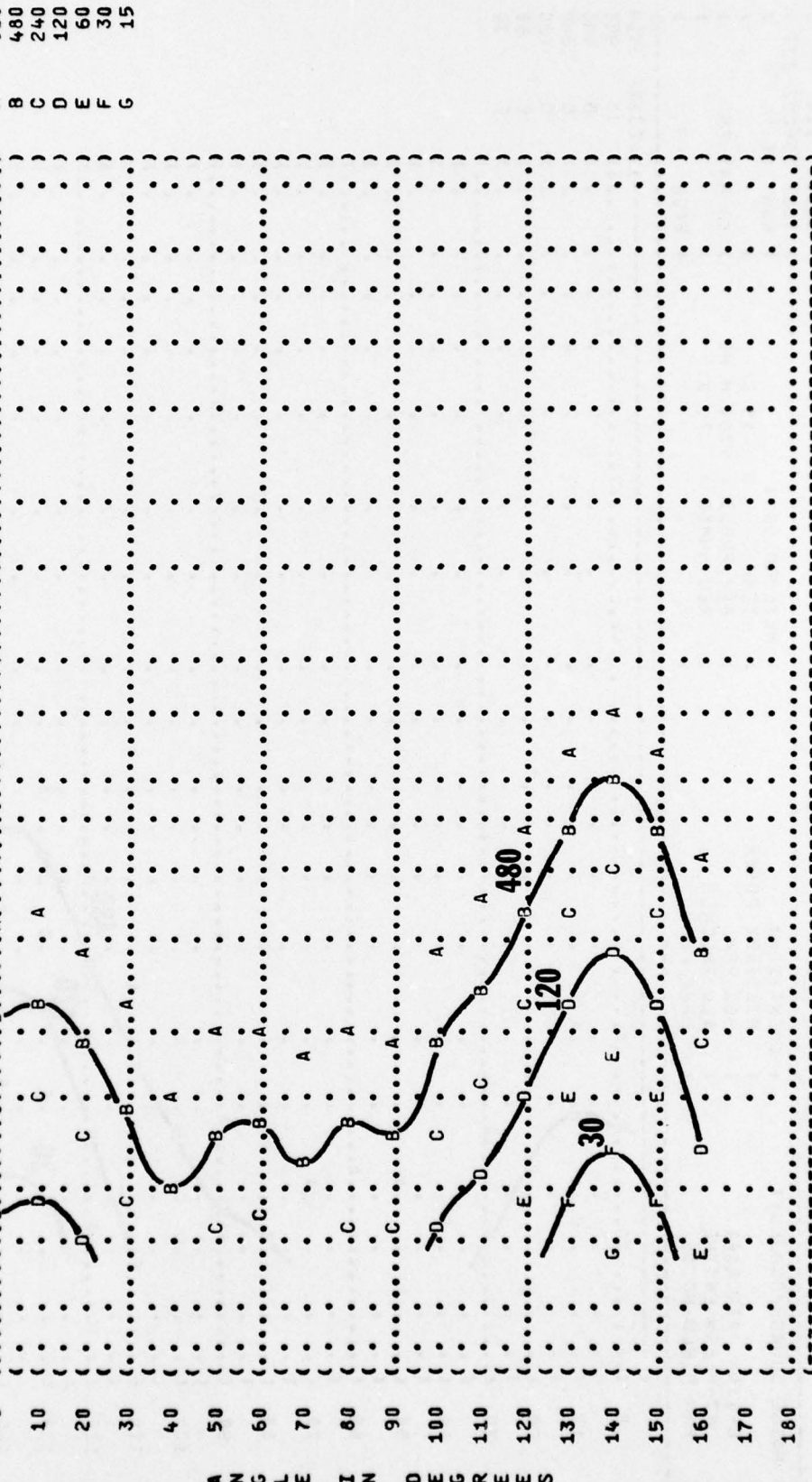


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)  
 IDENTIFICATION:  
 10  
 EQUAL TIME CONTOURS (MINUTES)  
 V-51R EAR PLUGS

NOISE SOURCE/SUBJECT: OPERATION:  
 C-135A AIRCRAFT MILITARY POWER  
 J57-P-59W ENGINE 96% RPM  
 FAR FIELD NOISE ALL ENGINES  
 FREE FLOW

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

PAGE 10

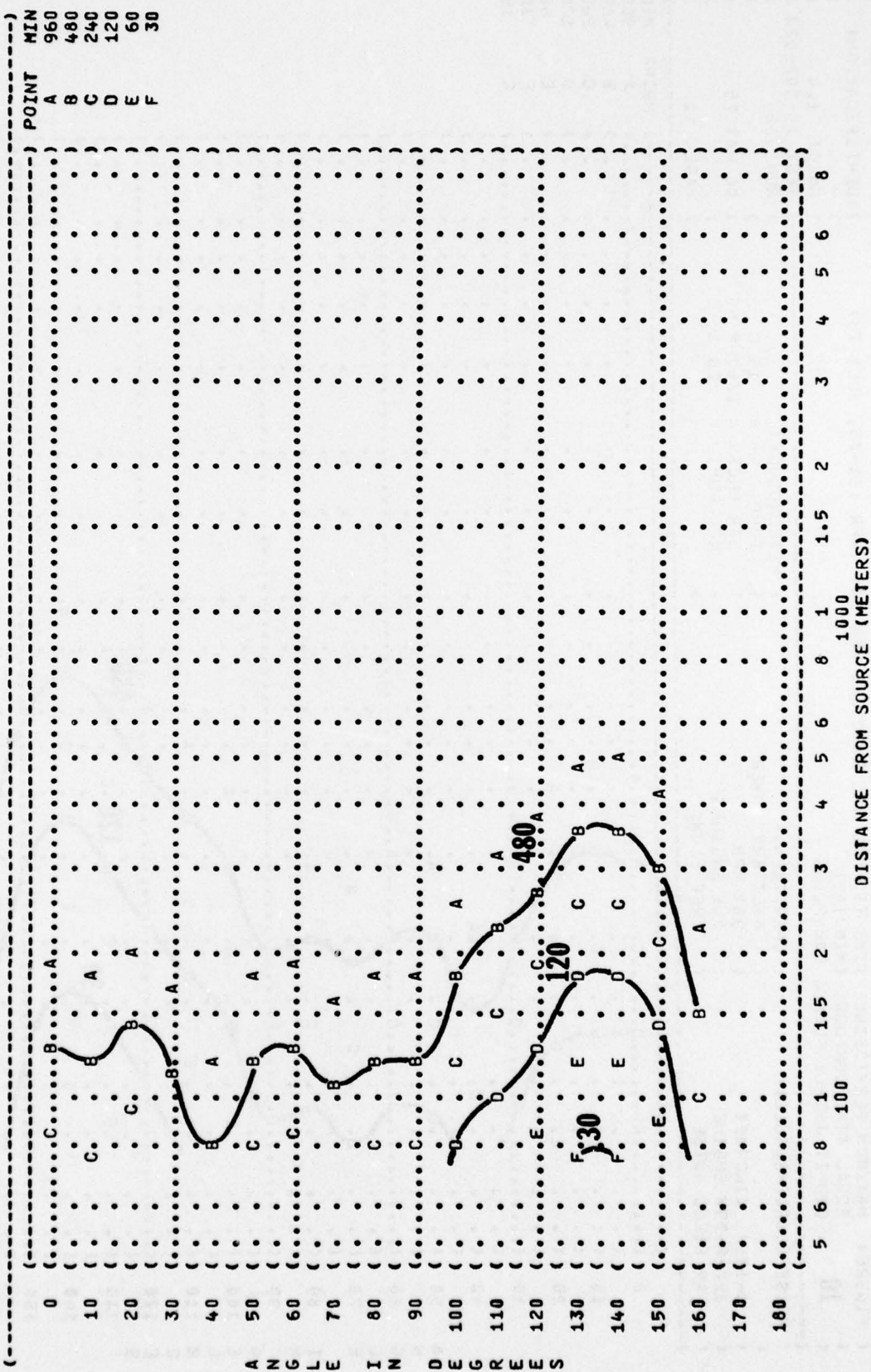


POINT MIN  
 A 960  
 B 480  
 C 240  
 D 120  
 E 60  
 F 30  
 G 15

DISTANCE FROM SOURCE (METERS)



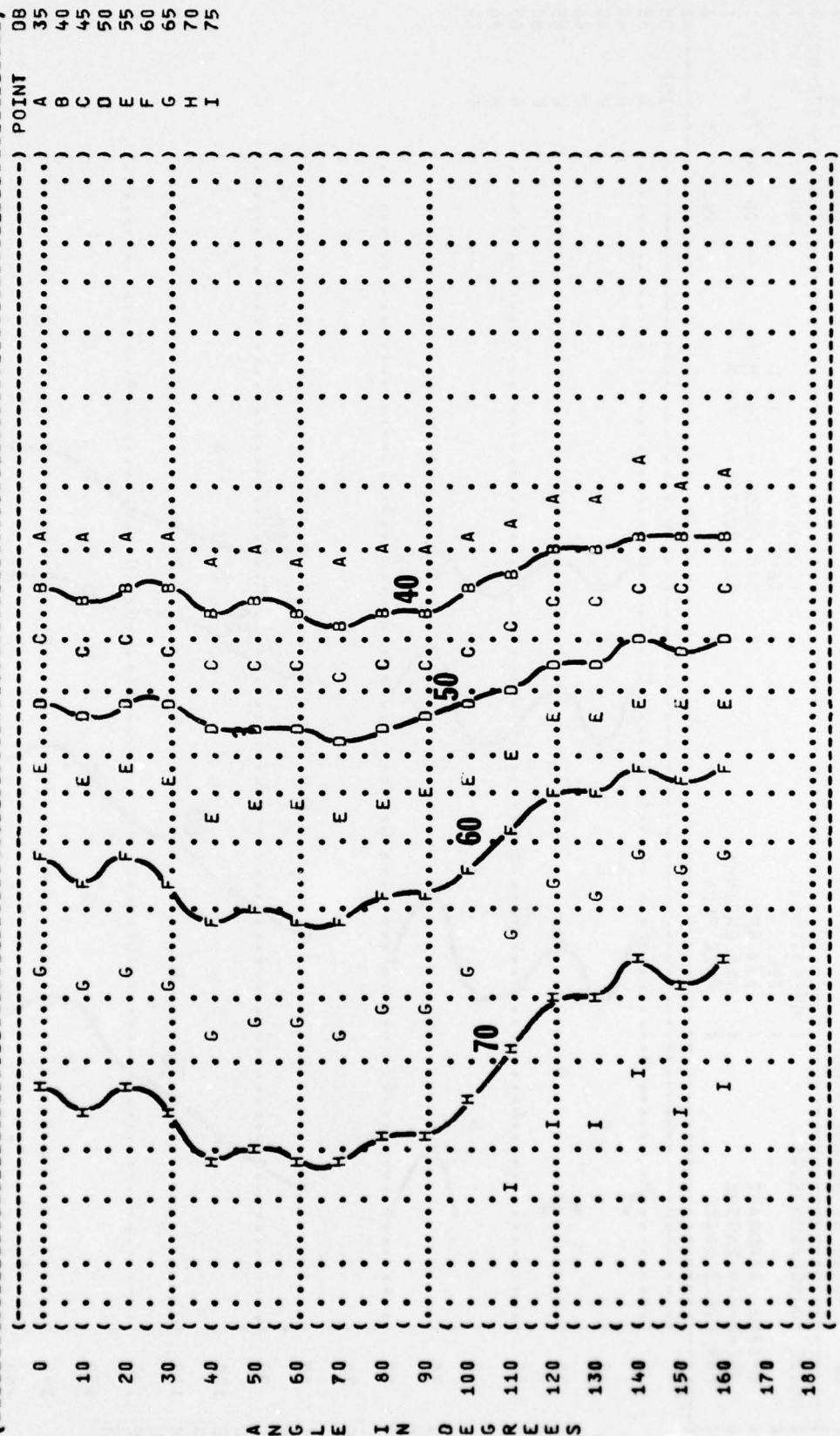
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(-----)
( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION:
( EQUAL TIME CONTOURS (MINUTES) )
( 10 ) OMEGA 1.4
( H-133 GROUND COMMUNICATION UNIT ) TEST 75-002-023
( NOISE SOURCE/SUBJECT: ) METEOROLOGY:
( C-135A AIRCRAFT ) TEMP = 15 C
( J57-P-59W ENGINE ) BAR PRESS = .760 M HG
( FAR FIELD NOISE ) ALL ENGINES REL HUMID = 70 %
( FREE FLOW ) PAGE 12
(-----)
```





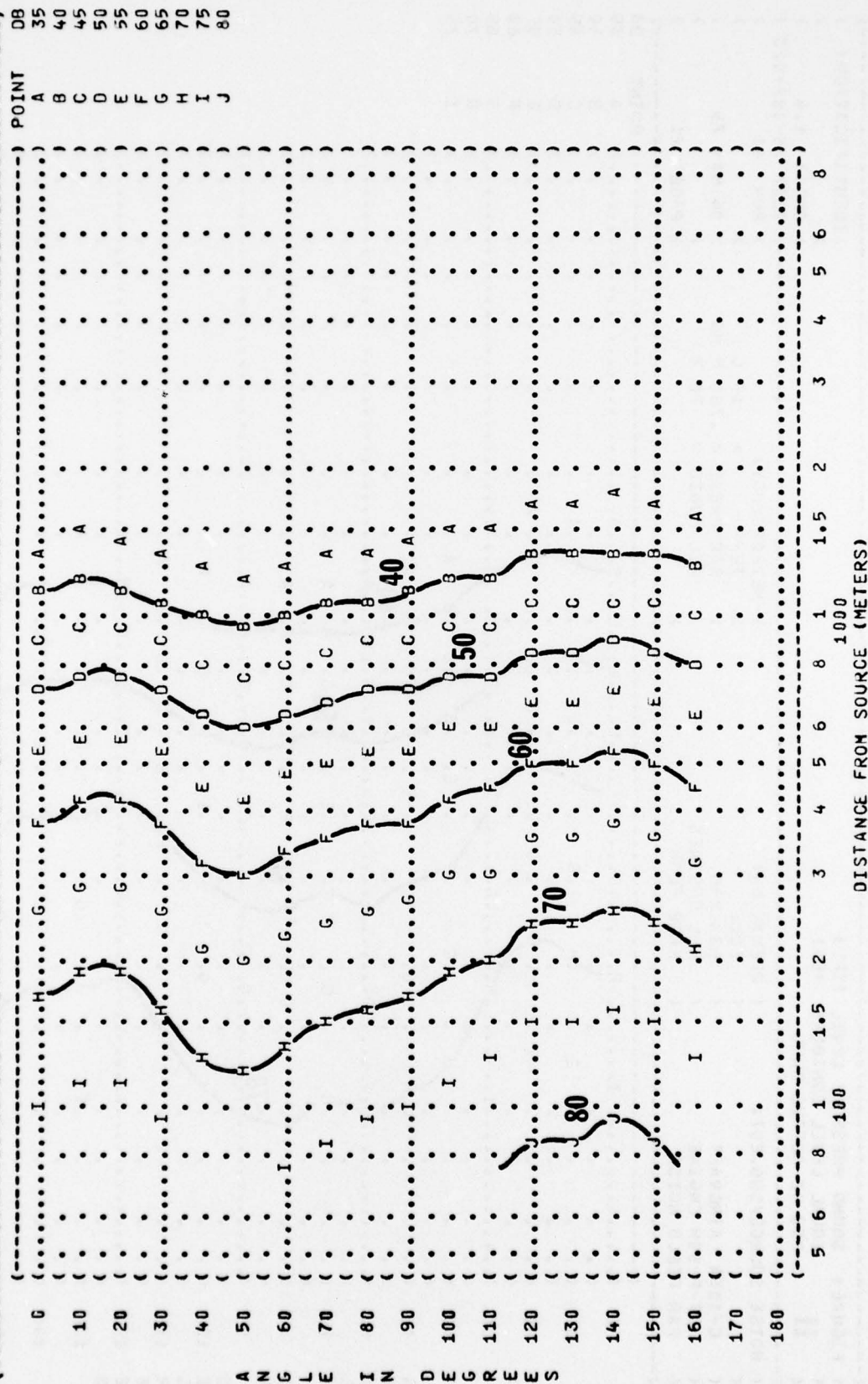


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( ( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION:
( ( EQUAL LEVEL CONTOURS (DB) ) )
( ( 11 ) OMEGA 1.4
( ( 63 HZ OCTAVE BAND ) TEST 75-002-023
----- ) RUN 01
( ( NOISE SOURCE/SUBJECT: ) METEOROLOGY:
( ( OPERATION: ) TEMP = 15 C
( ( IDLE ) BAR PRESS = .760 M HG
( ( 63% RPM ) REL HUMID = 70 %
( ( ALL ENGINES ) )
( ( FREE FLOW ) PAGE 19
```

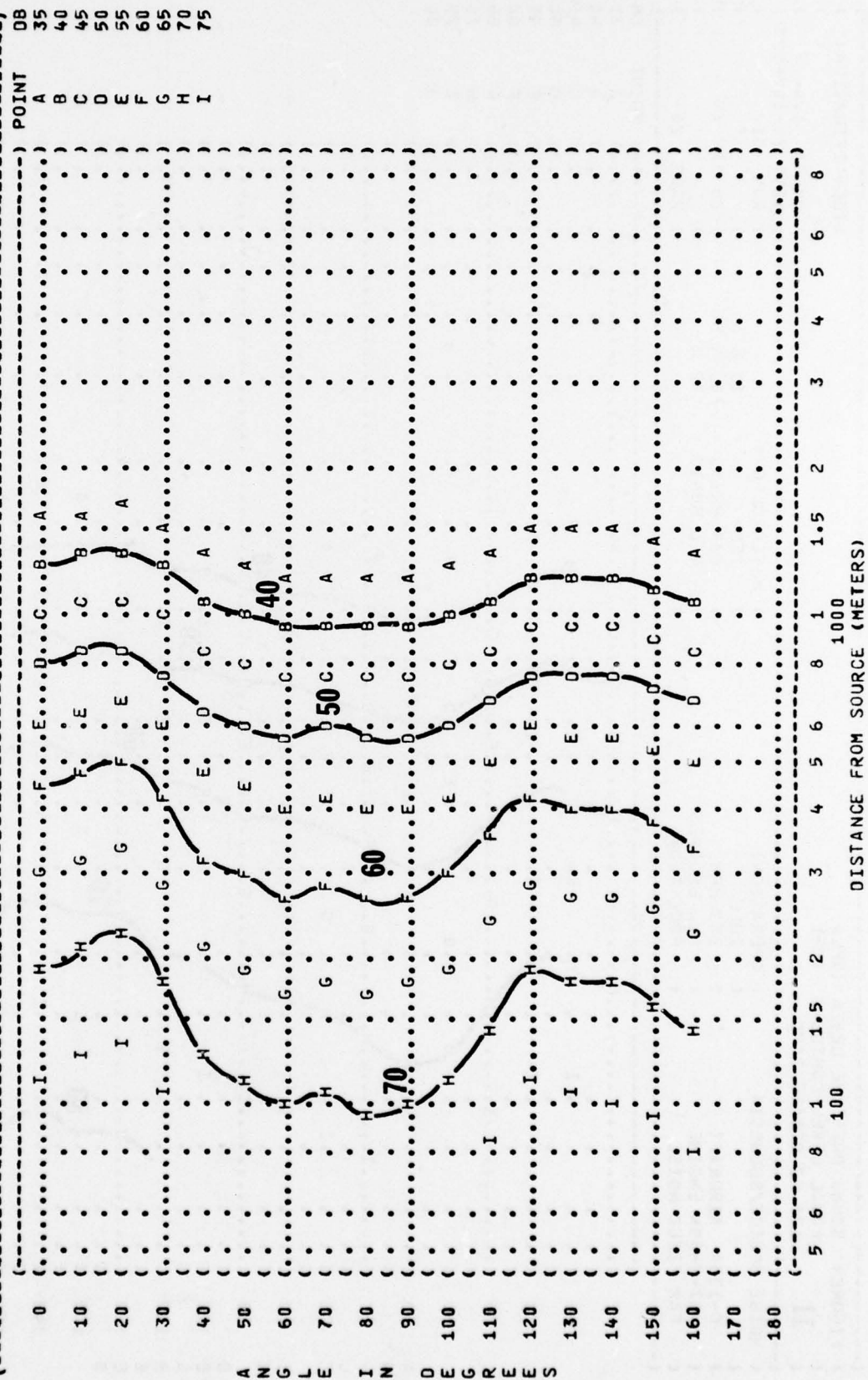


DISTANCE FROM SOURCE (METERS)

```
(-----)
( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( EQUAL LEVEL CONTOURS (DB) ) )
( 11 ) OMEGA 1.4 )
( 125 HZ OCTAVE BAND ) TEST 75-002-023 )
( NOISE SOURCE/SUBJECT: ) RUN 01 )
( OPERATION: ) METEOROLOGY: )
( IDLE ) TEMP = 15 C )
( 63% RPM ) BAR PRESS = .760 M HG )
( ALL ENGINES ) REL HUMID = 70 % )
( FREE FLOW ) PAGE 20 )
(-----)
```

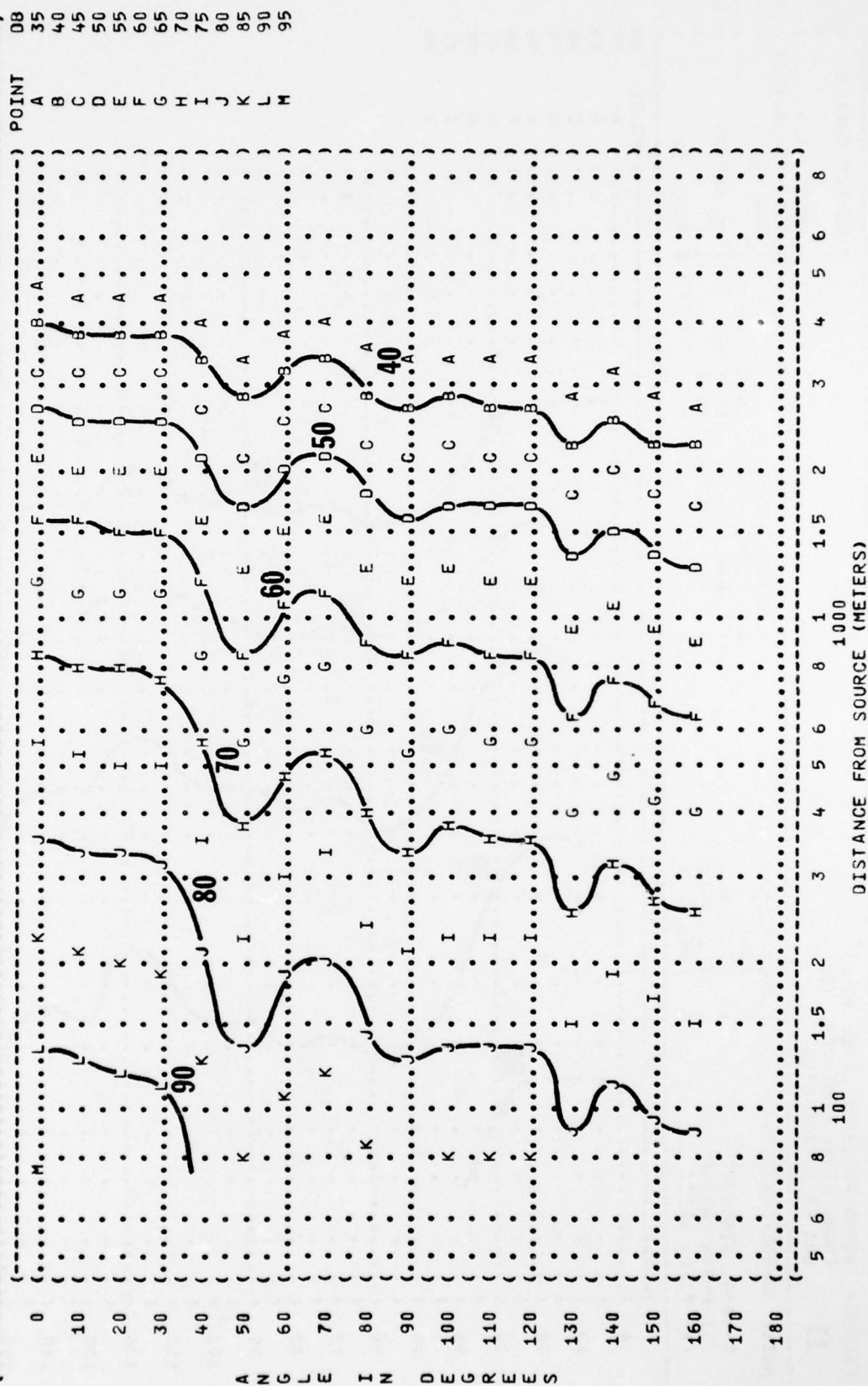








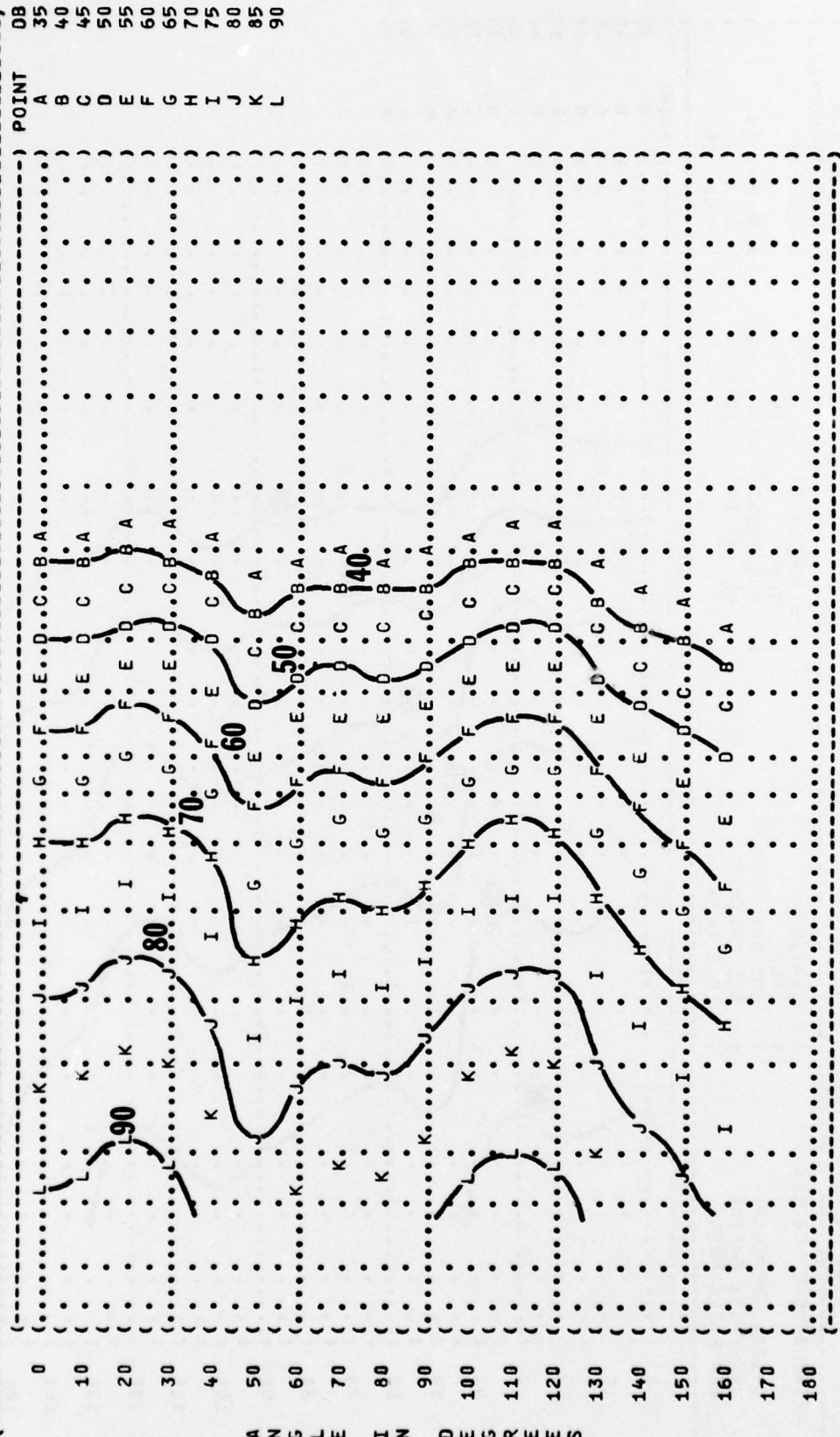
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 1000 HZ OCTAVE BAND  
 ( 11  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ( METEOROLOGY:  
 ( ( ( ( ( TEMP = 15 C  
 ( C-135A AIRCRAFT ( ( 63% RPM ( BAR PRESS = .760 M HG  
 ( J57-P-59W ENGINE ( ( ALL ENGINES ( REL HUMID = 70 %  
 ( FAR FIELD NOISE ( ( FREE FLOW ( )  
 ( ) IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-023  
 ( ) RUN 01  
 ( ) 06 MAY 75  
 ( ) PAGE 23







( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 4000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: )  
 ( ( IDLE )  
 ( ( 63% RPM )  
 ( ( ALL ENGINES )  
 ( ( FREE FLOW )  
 ( G-135A AIRCRAFT )  
 ( J57-P-59M ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 01 )  
 ( 06 MAY 75 )  
 ( PAGE 25 )



A N G L E I N D E G R E E S

FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 8000 HZ OCTAVE BAND

11

NOISE SOURCE/SUBJECT: C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE

OPERATION: IDLE  
 63% RPM  
 ALL ENGINES  
 FREE FLOW

METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4  
 TEST 75-002-023  
 RUN 01  
 06 MAY 75  
 PAGE 26

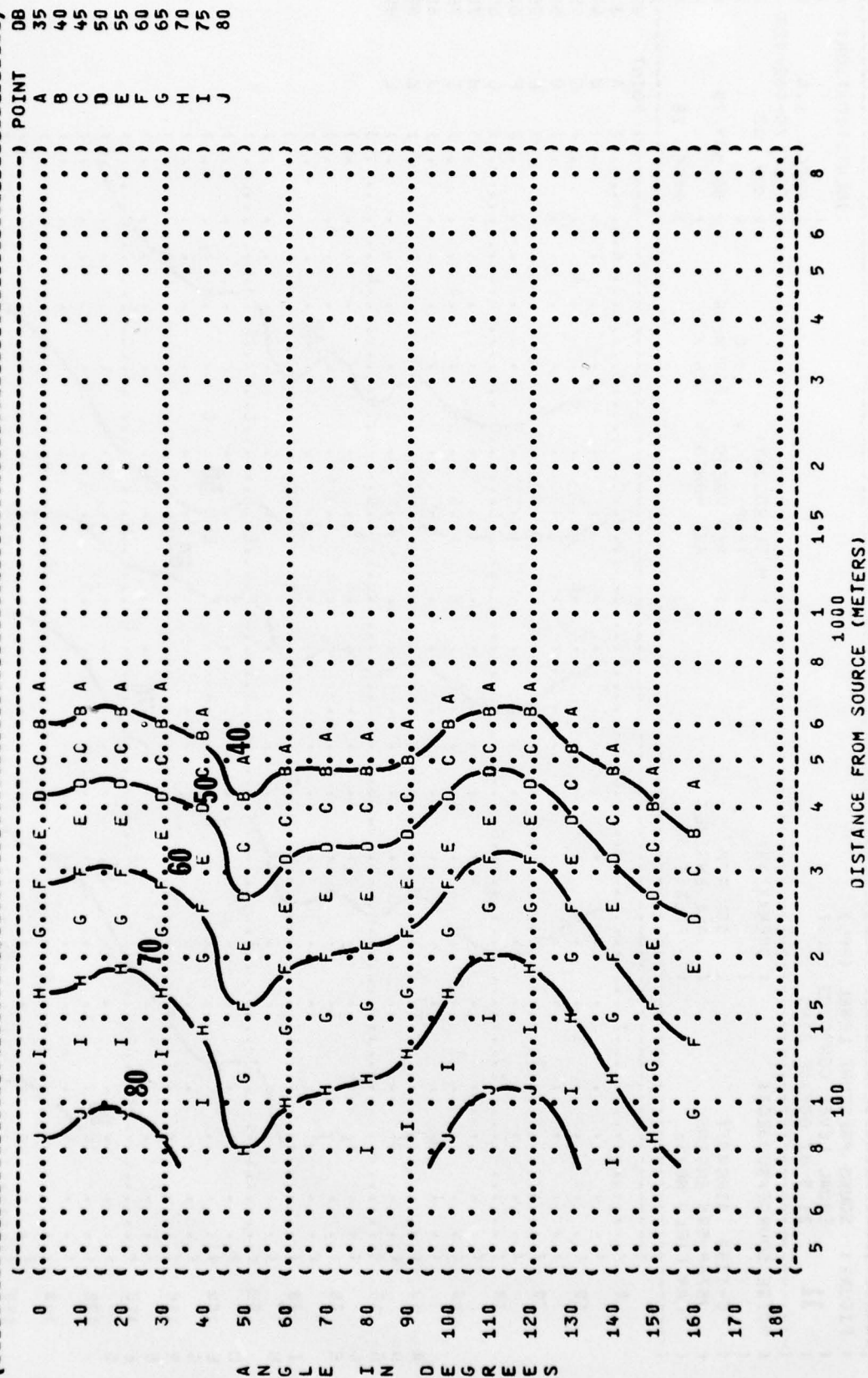




FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 31.5 HZ OCTAVE BAND

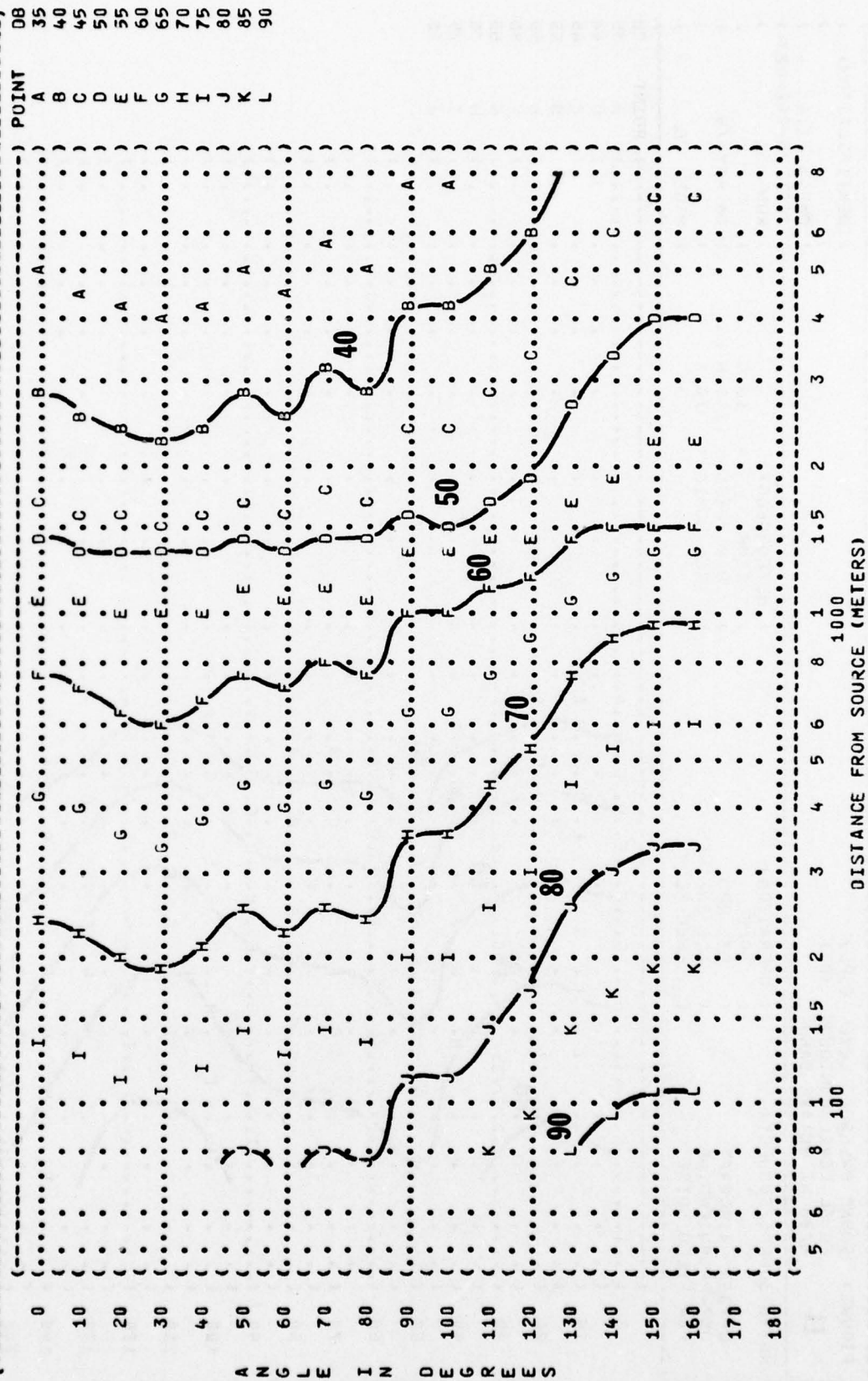
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IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 02

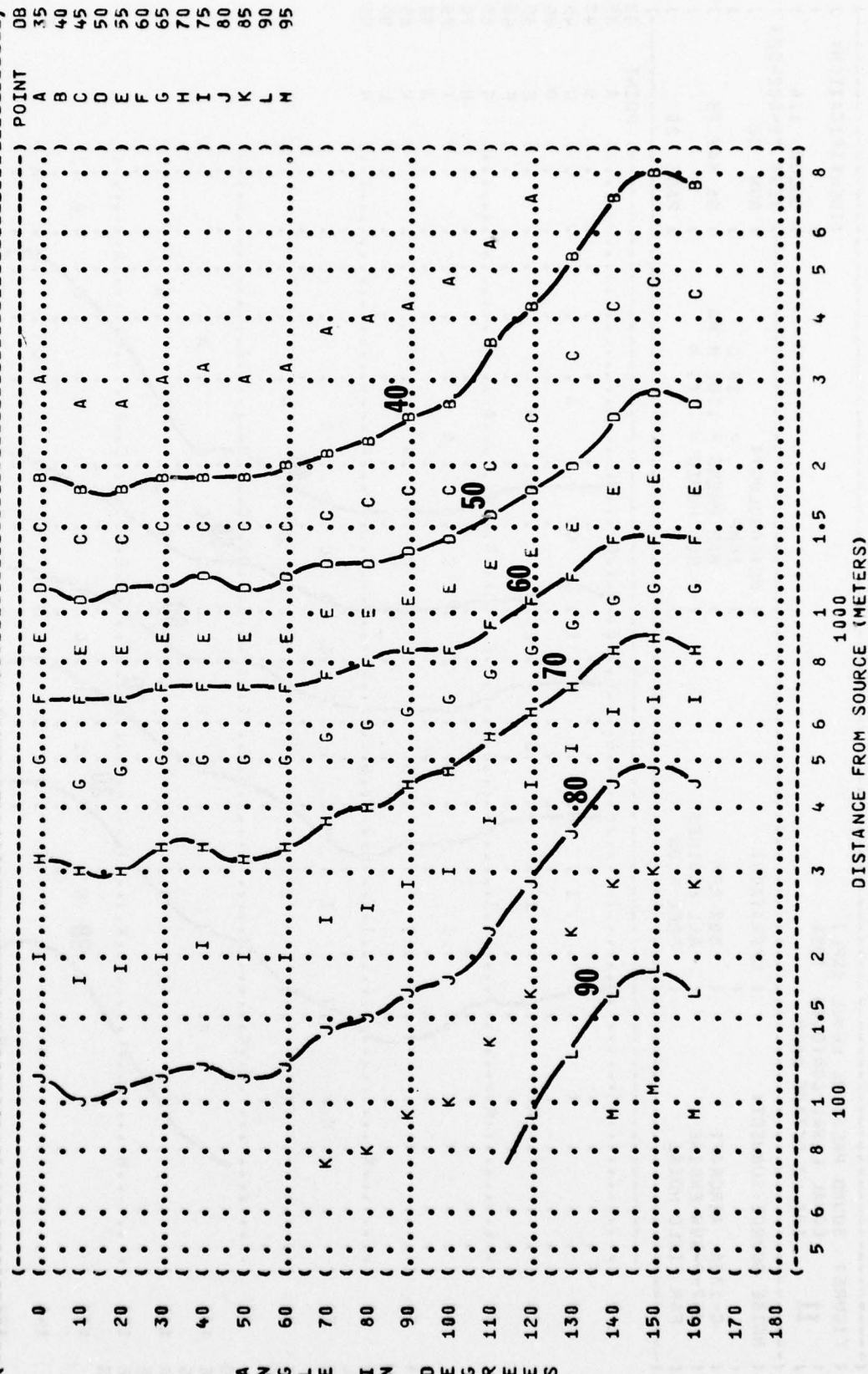
NOISE SOURCE/SUBJECT:  
 OPERATION:  
 C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

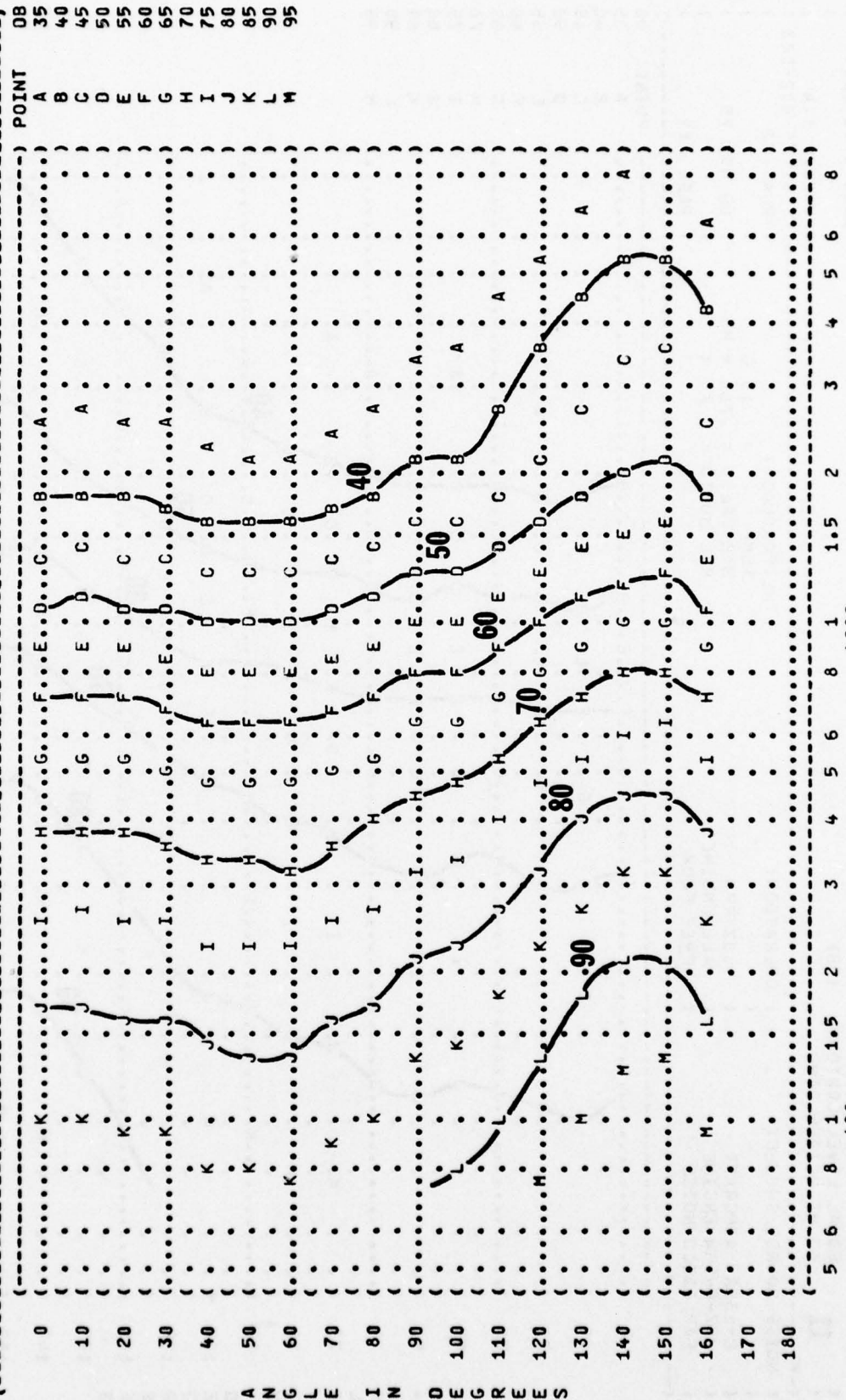
06 MAY 75  
 PAGE 18



( FIGURE: SOUND PRESSURE LEVEL (SPL) ) IDENTIFICATION: )  
 ( EQUAL LEVEL CONTOURS (DB) ) )  
 ( 11 63 HZ OCTAVE BAND ) OMEGA 1.4 )  
 ( ) TEST 75-002-023 )  
 ( ) RUN 02 )  
 ( NOISE SOURCE/SUBJECT: ) METEOROLOGY: )  
 ( ) TEMP = 15 C )  
 ( C-135A AIRCRAFT ) BAR PRESS = .760 M HG )  
 ( J57-P-59M ENGINE ) REL HUMID = 70 % )  
 ( FAR FIELD NOISE ) )  
 ( ) PAGE 19 )

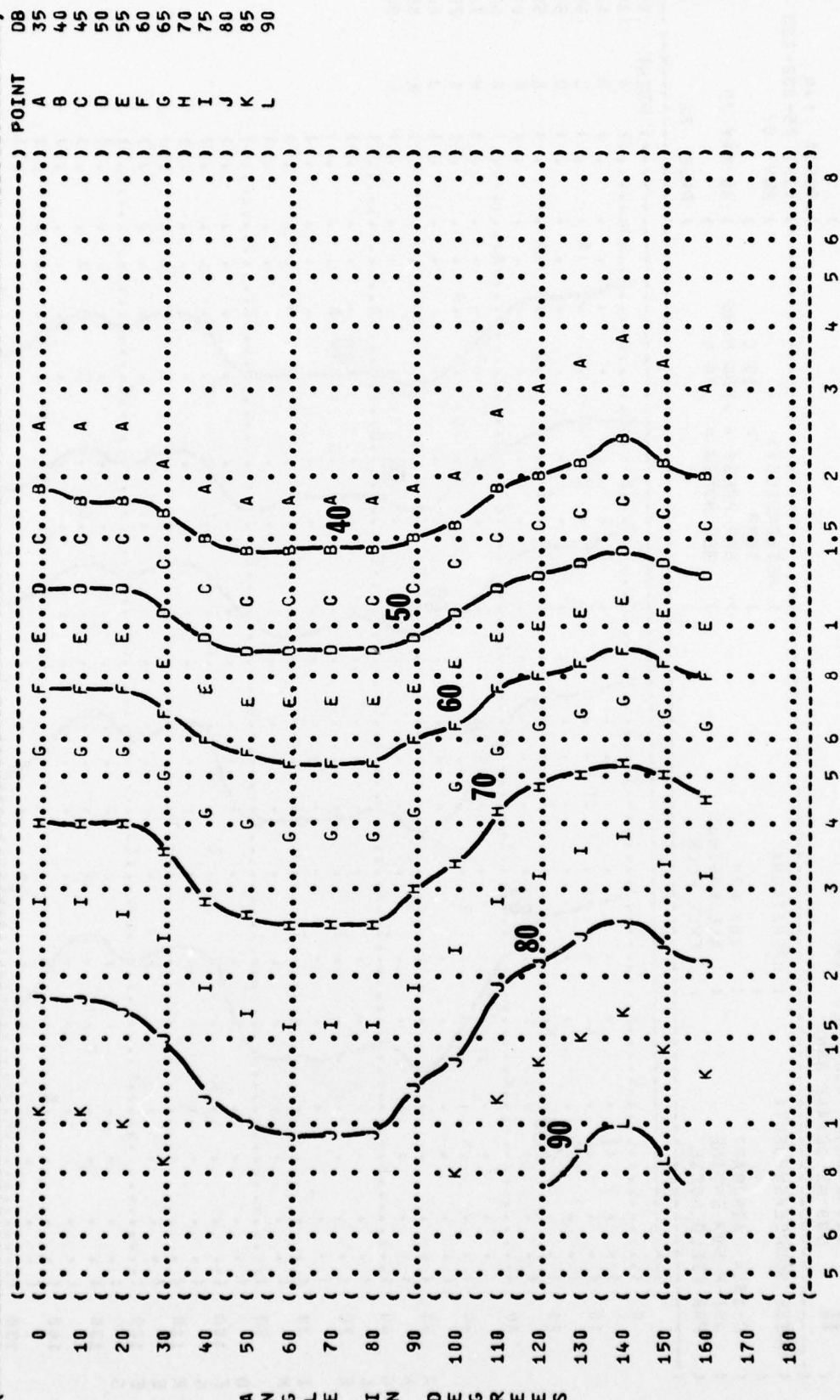


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 80% RPM  
 ( J57-P-59M ENGINE ( ALL ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( 06 MAY 75  
 ( PAGE 20  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 02





( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( EQUAL LEVEL CONTOURS (DB) )  
 ( 11 250 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 02 )  
 ( 06 MAY 75 )  
 ( PAGE 21 )



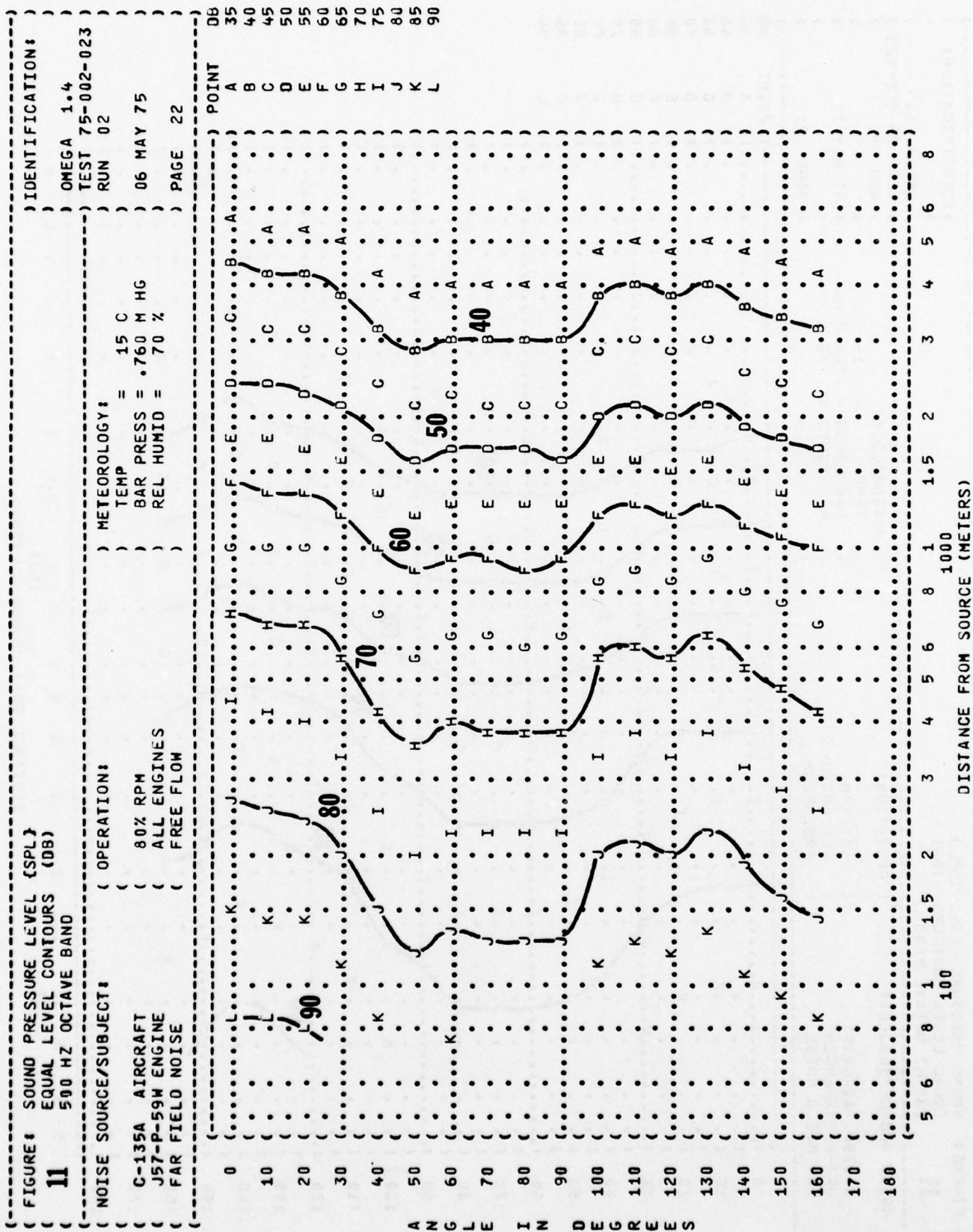
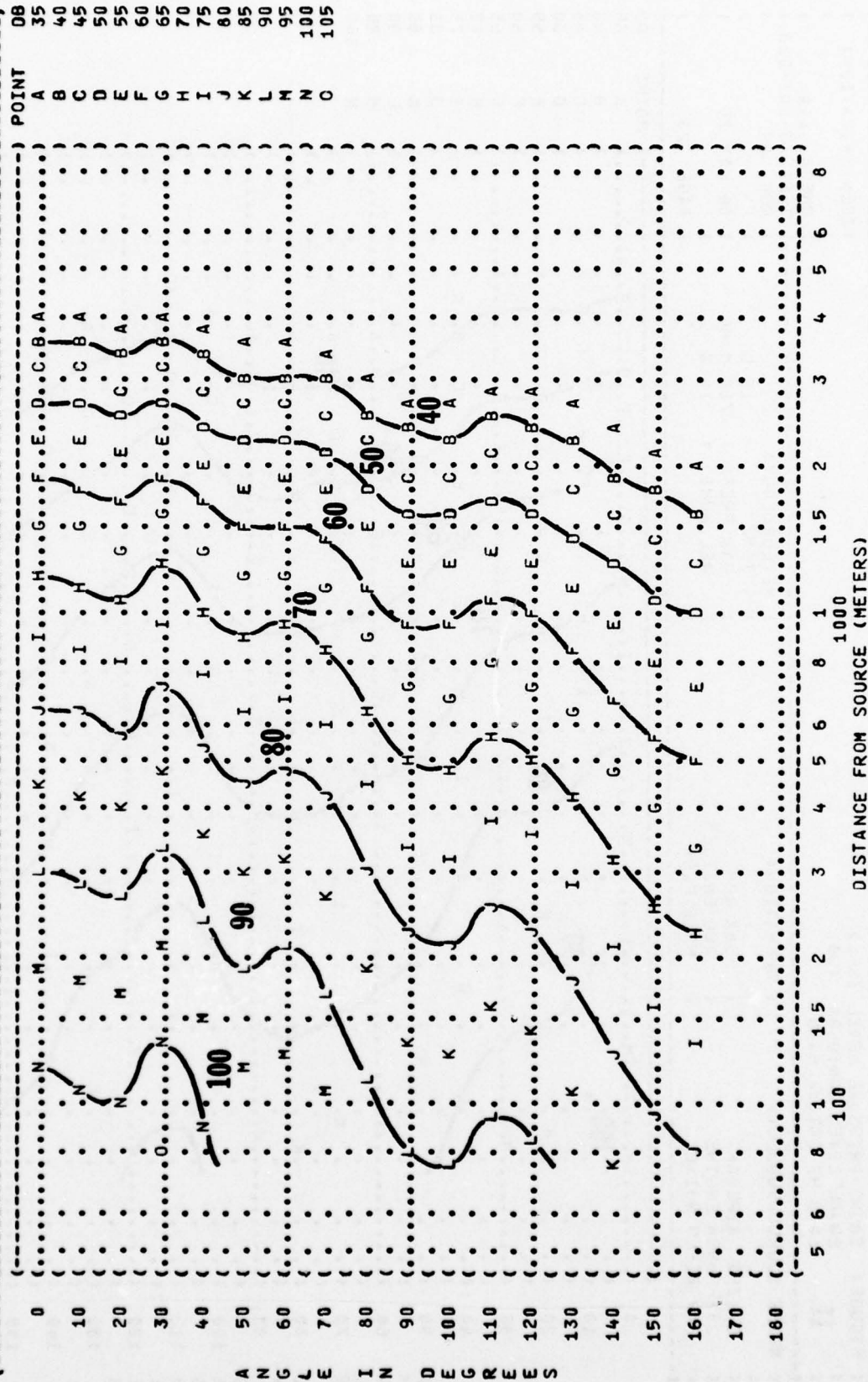






FIGURE:	SOUND PRESSURE LEVEL	{SPL}	IDENTIFICATION:
11	EQUAL LEVEL CONTOURS	(DB)	
	2000 HZ OCTAVE BAND		
NOISE SOURCE/SUBJECT:			
	(	OPERATION:	
	(	TEMP = 15 C	
	(	80% RPM	
	(	ALL ENGINES	
	(	FREE FLOW	
	C-135A AIRCRAFT		
	J57-P-59H ENGINE		
	FAR FIELD NOISE		
METEOROLOGY:			
		BAR PRESS = .760 M HG	
		REL HUMID = 70 %	
TEST 75-002-023			
RUN 02			
OMEGA 1.4			
PAGE 24			



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( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE  
 ( J57-P-59W ENGINE ( OTHER ENGINES IDLE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 03  
 ( 06 MAY 75  
 ( PAGE 19

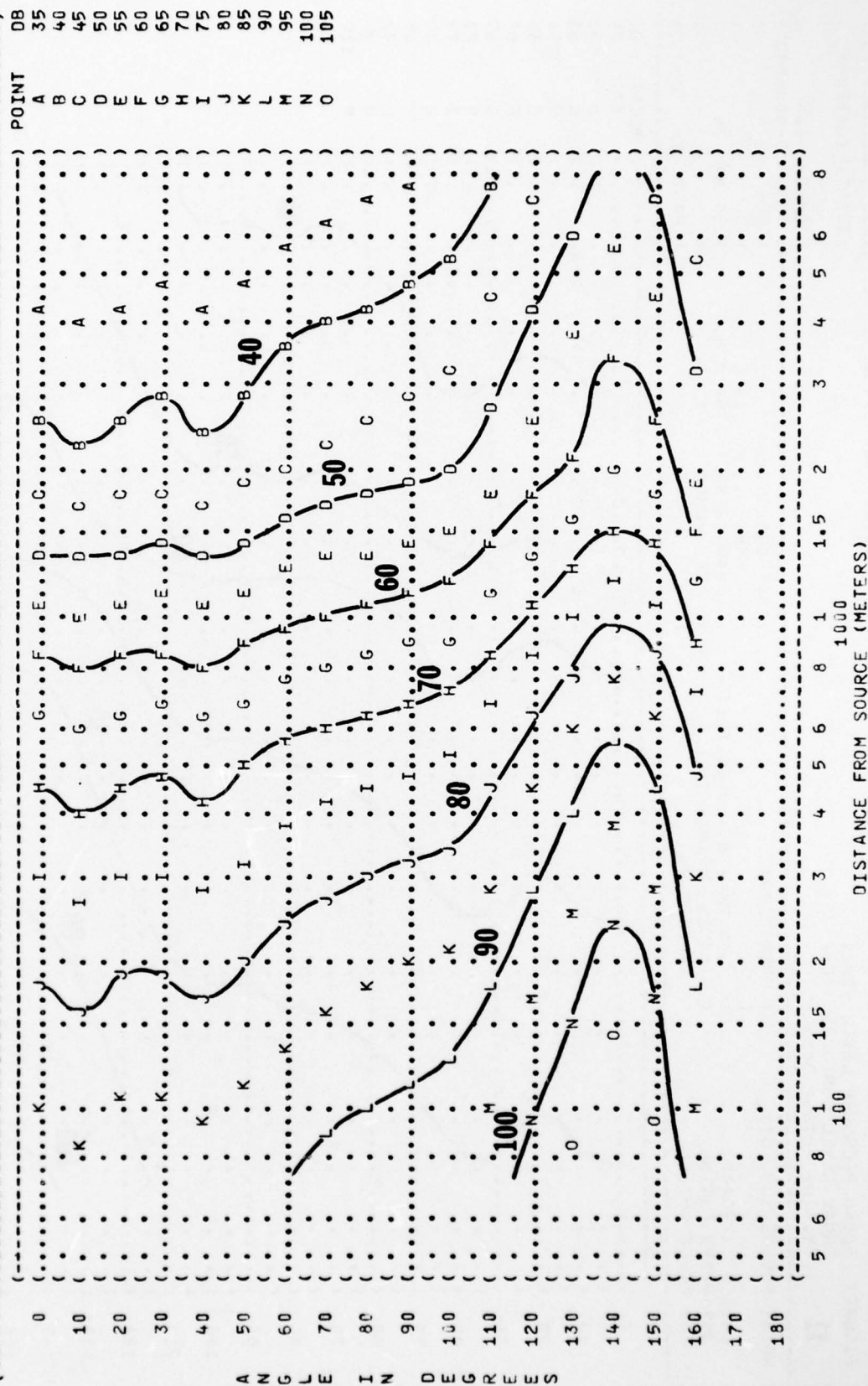
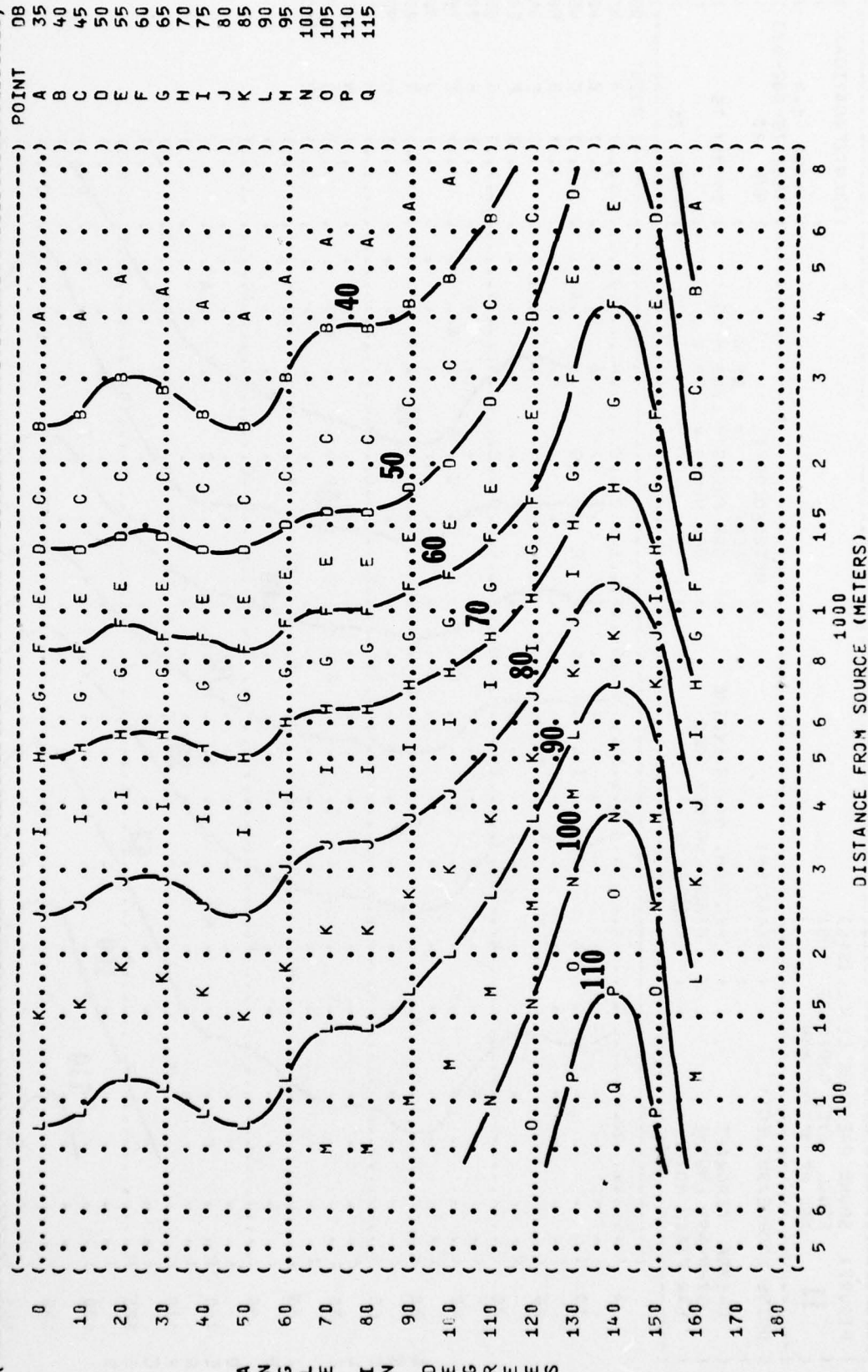


FIGURE: SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
125 HZ OCTAVE BAND

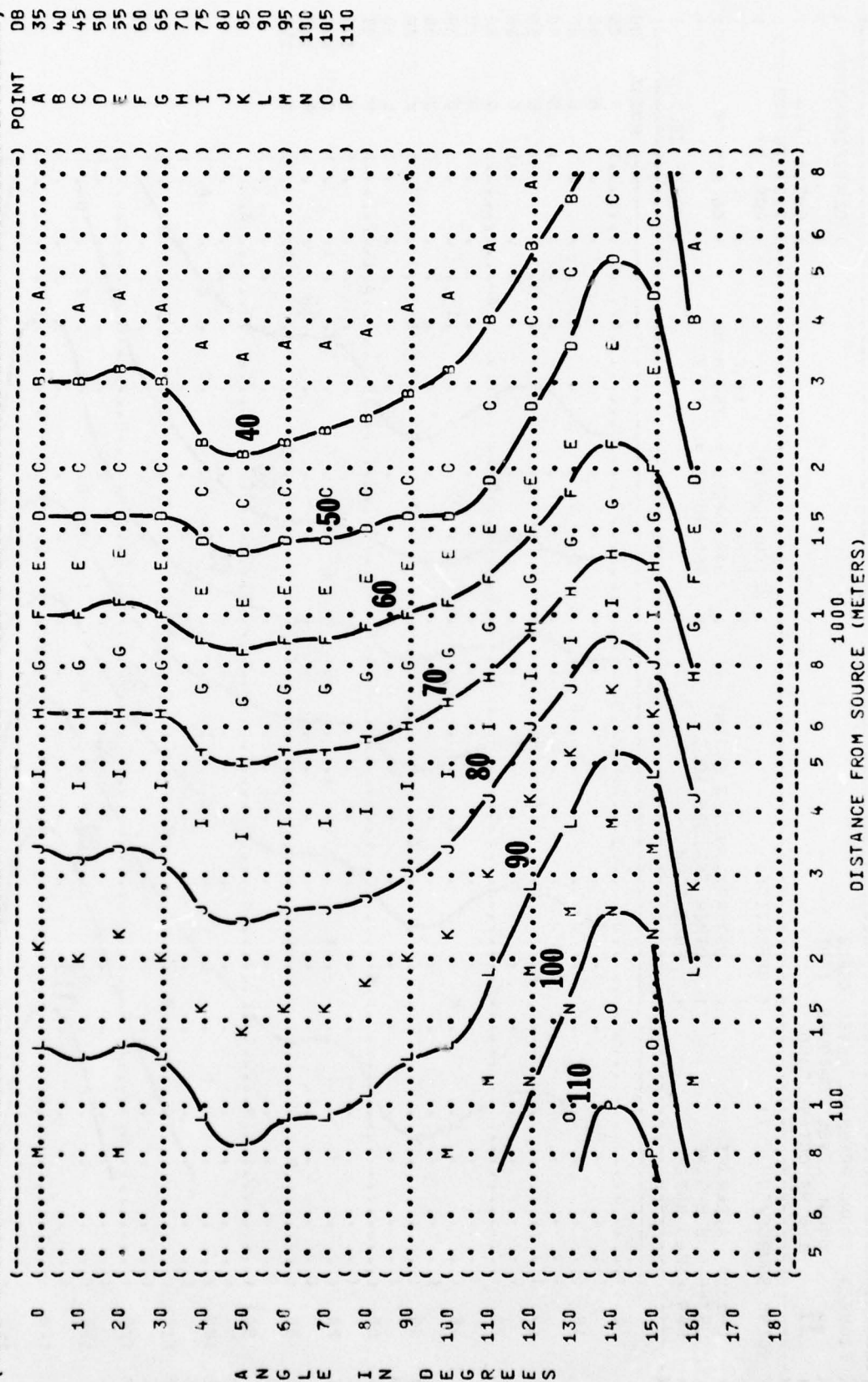
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NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ) IDENTIFICATION: )  
( ( ( TEMP = 15 C ) )  
( ( 90% RPM, NO. 3 ENGINE ) BAR PRESS = .760 M HG )  
( ( OTHER ENGINES IDLE ) REL HUMID = 70 % )  
( ( FREE FLOW ) ) PAGE 20 )

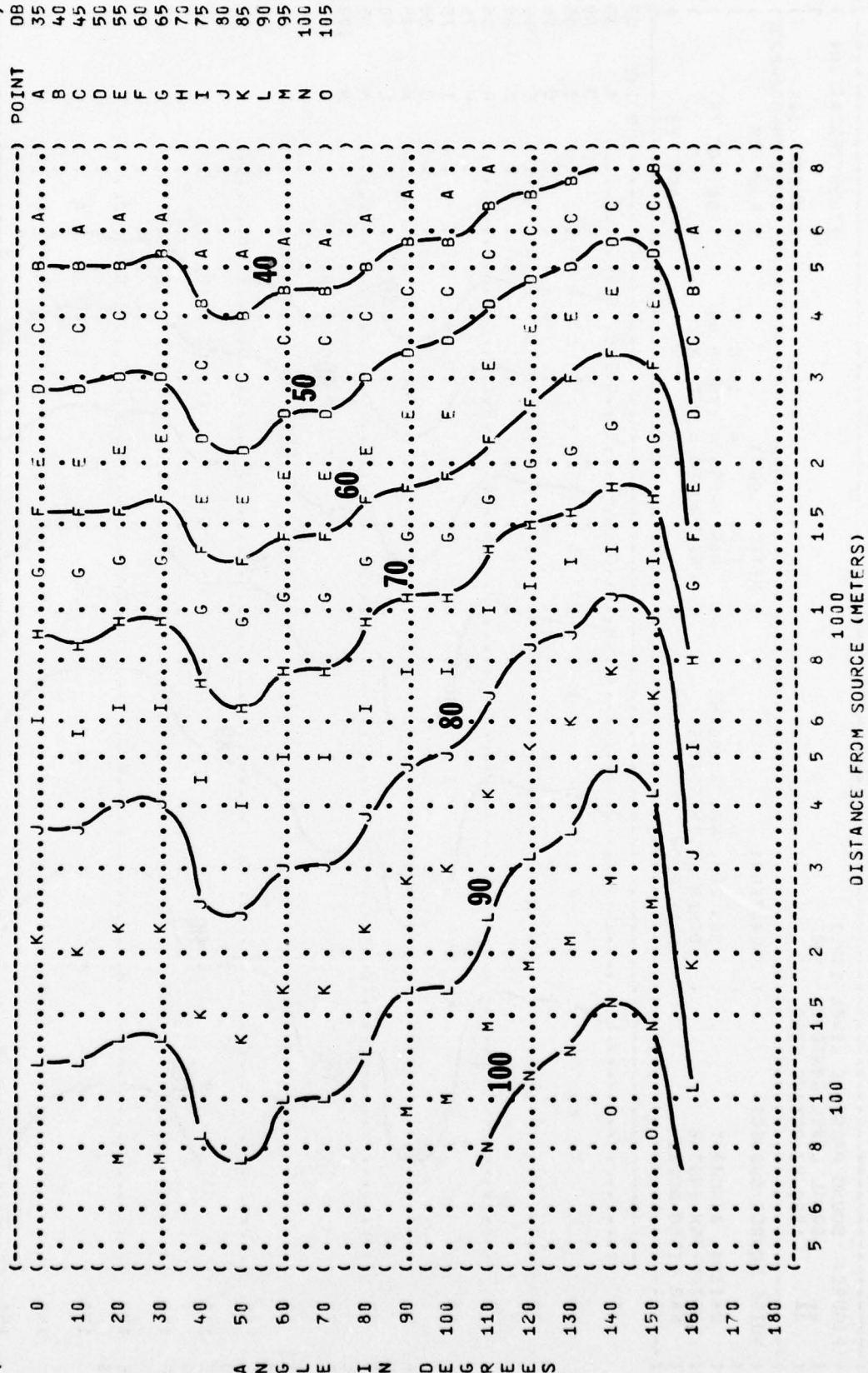




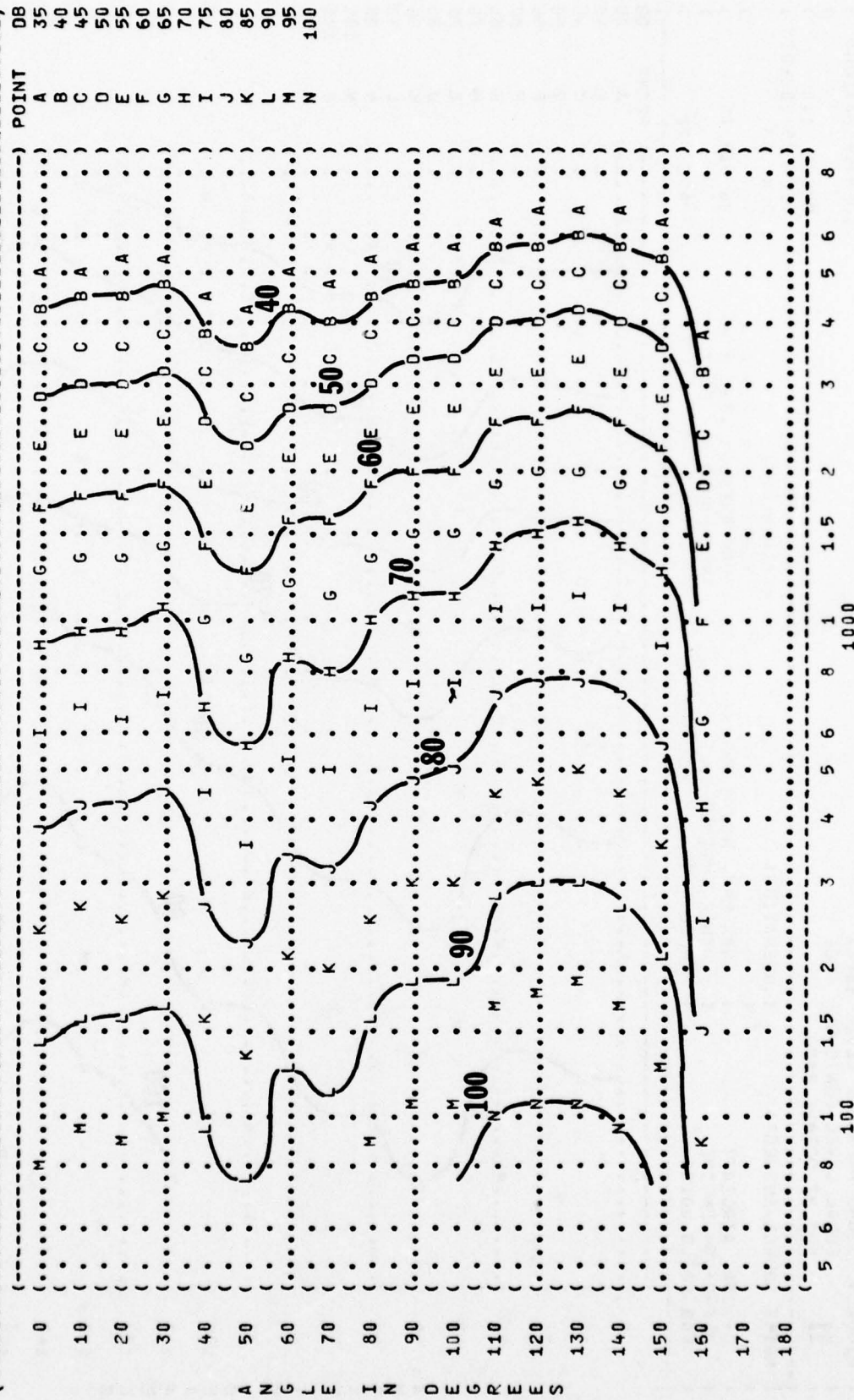
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( ( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( ( EQUAL LEVEL CONTOURS (DB) ) )
( ( 250 HZ OCTAVE BAND ) )
11
-----
( ( NOISE SOURCE/SUBJECT: ) METEOROLOGY: )
( ( OPERATION: ) TEMP = 15 C )
( ( 90% RPM, NO. 3 ENGINE ) BAR PRESS = .760 M HG )
( ( OTHER ENGINES IDLE ) REL HUMID = 70 % )
( ( FREE FLOW ) )
C-135A AIRCRAFT
J57-P-59W ENGINE
FAR FIELD NOISE
PAGE 21
```



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE  
 ( J57-P-59W ENGINE ( OTHER ENGINES IDLE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( 06 MAY 75  
 ( PAGE 22  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 03

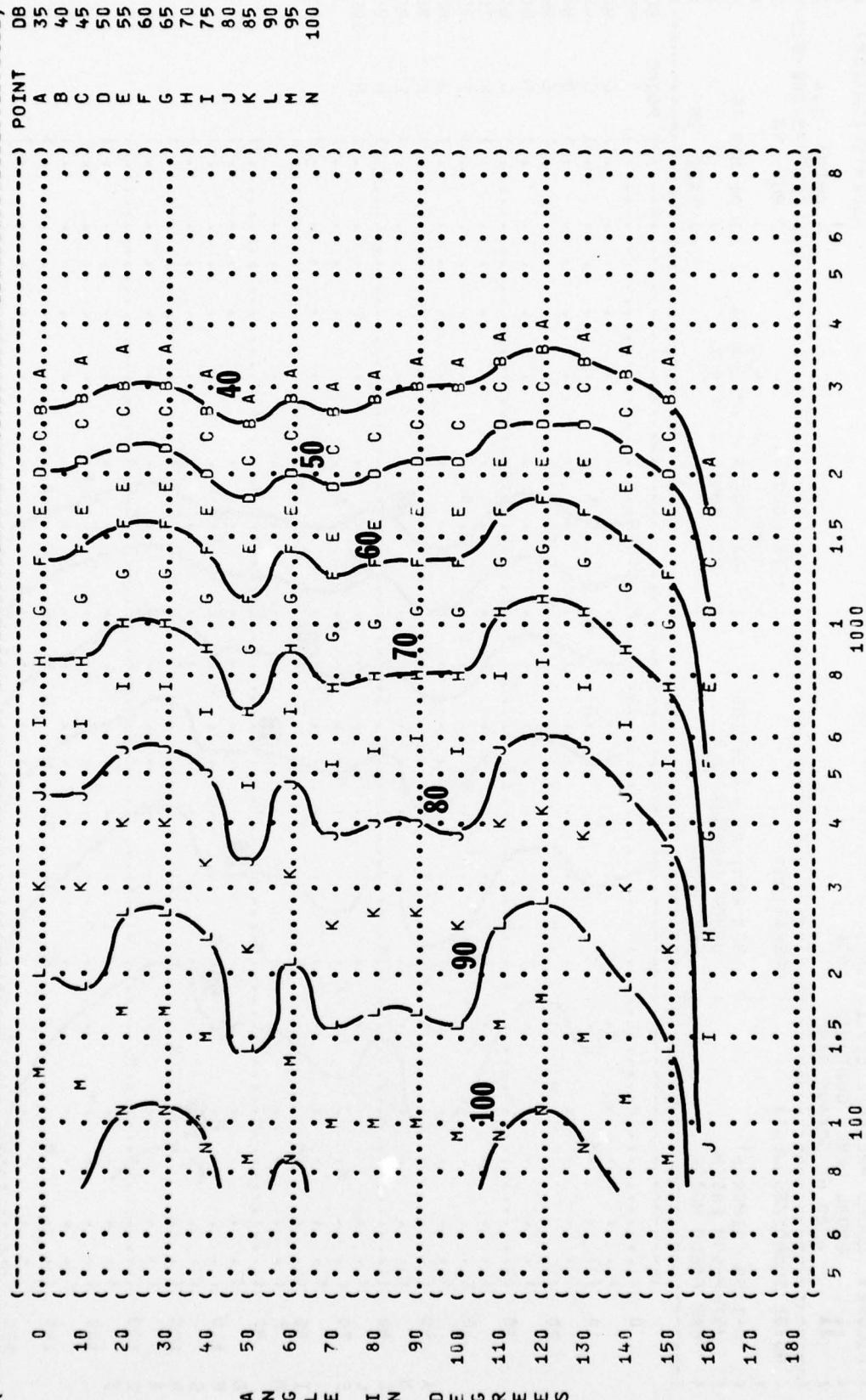


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(-----)
( FIGURE# SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION# )
( EQUAL LEVEL CONTOURS (DB) ) )
( 11 ) OMEGA 1.4 )
( 1000 HZ OCTAVE BAND ) TEST 75-002-023 )
( NOISE SOURCE/SUBJECT# : OPERATION# ) RUN 03 )
( C-135A AIRCRAFT ) TEMP = 15 C )
( J57-P-59W ENGINE ) BAR PRESS = .760 M HG )
( FAR FIELD NOISE ) OTHER ENGINES IDLE ) 06 MAY 75 )
( FREE FLOW ) REL HUMID = 70 % )
( ) PAGE 23 )
(-----)
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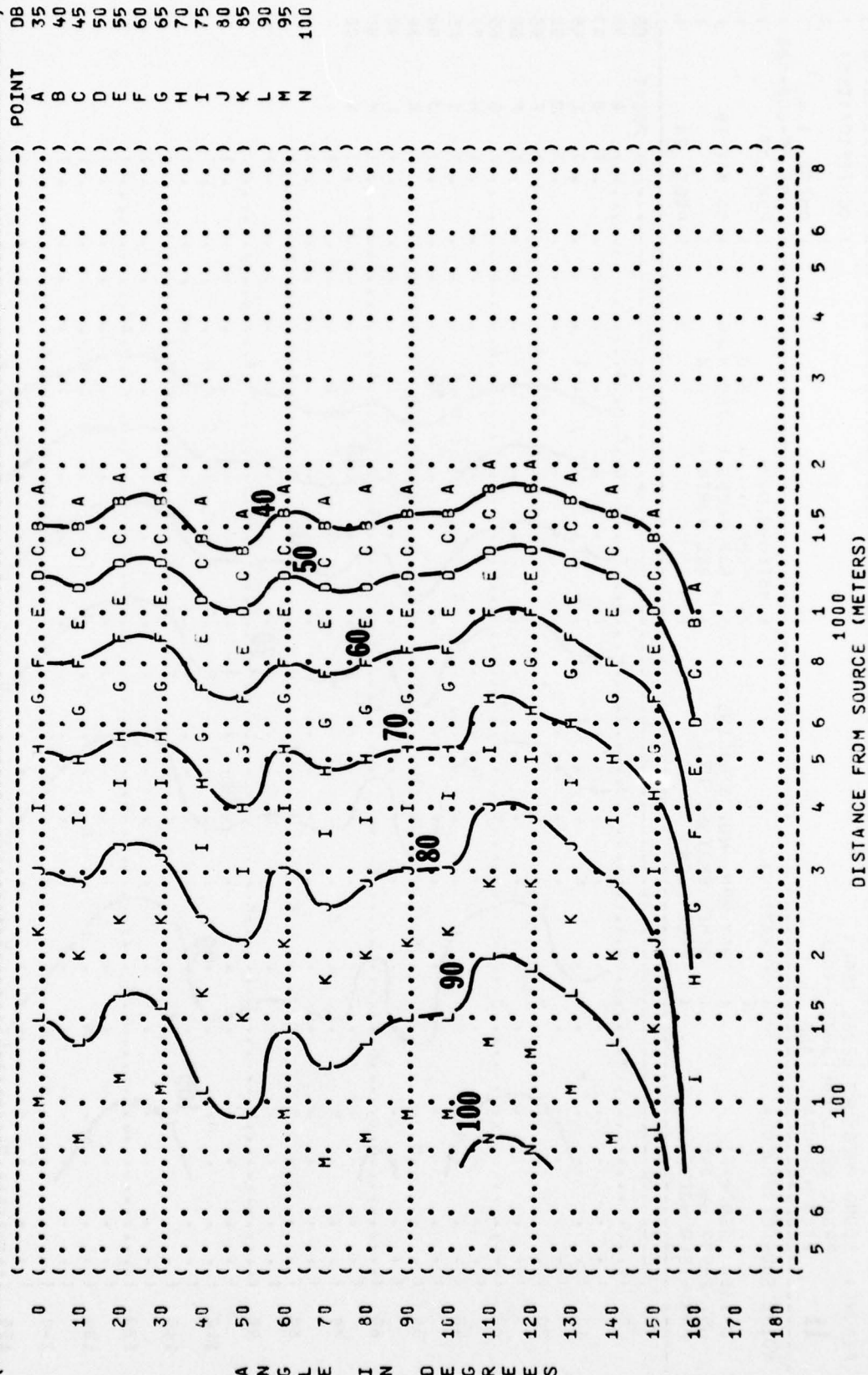


( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE  
 ( J57-P-59W ENGINE ( OTHER ENGINES IDLE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 03  
 ( 06 MAY 75  
 ( PAGE 24



ANGLES

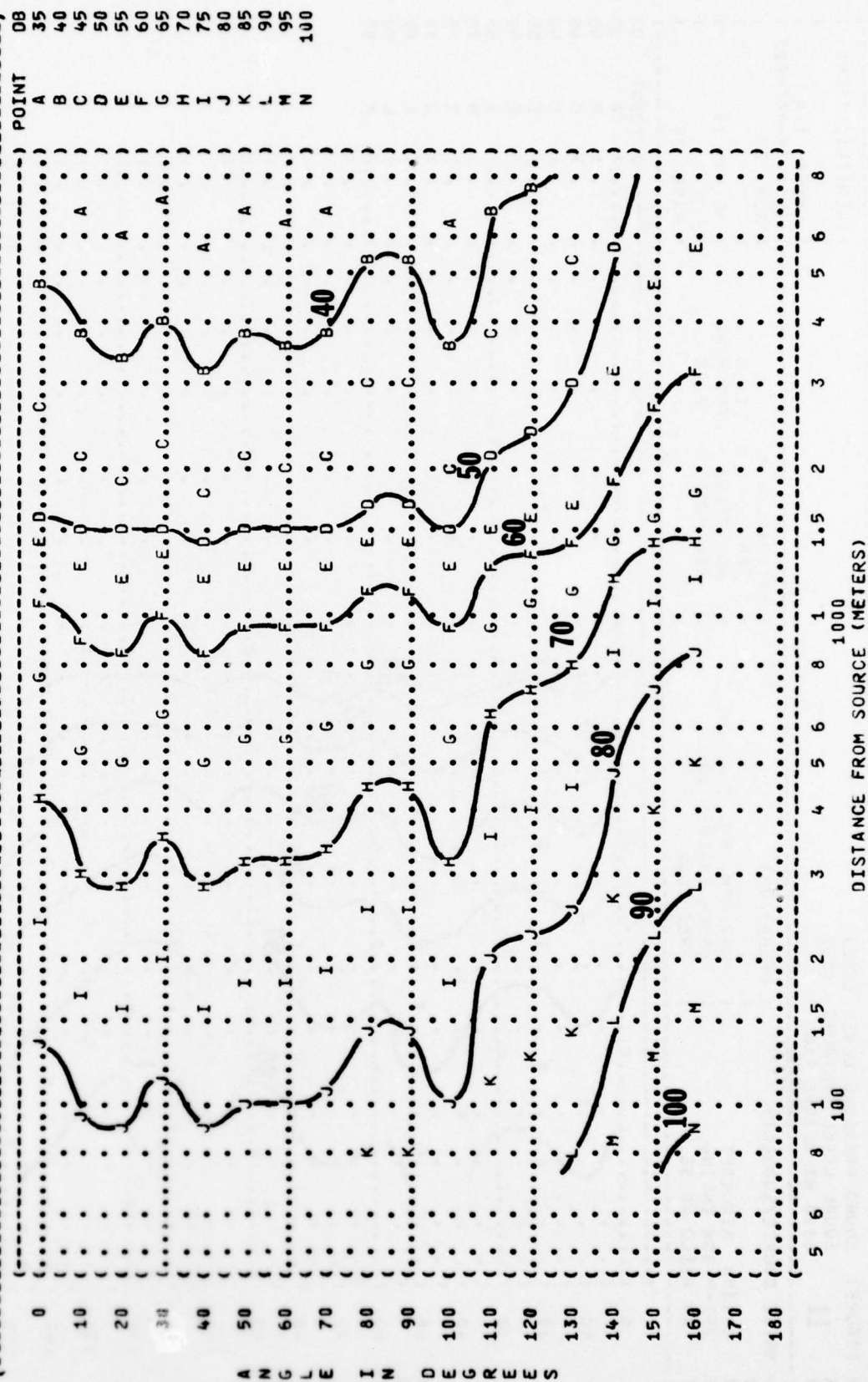
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( **11** 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 90% RPM, NO. 3 ENGINE  
 ( J57-P-59W ENGINE ( OTHER ENGINES IDLE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 03  
 ( 06 MAY 75  
 ( PAGE 25



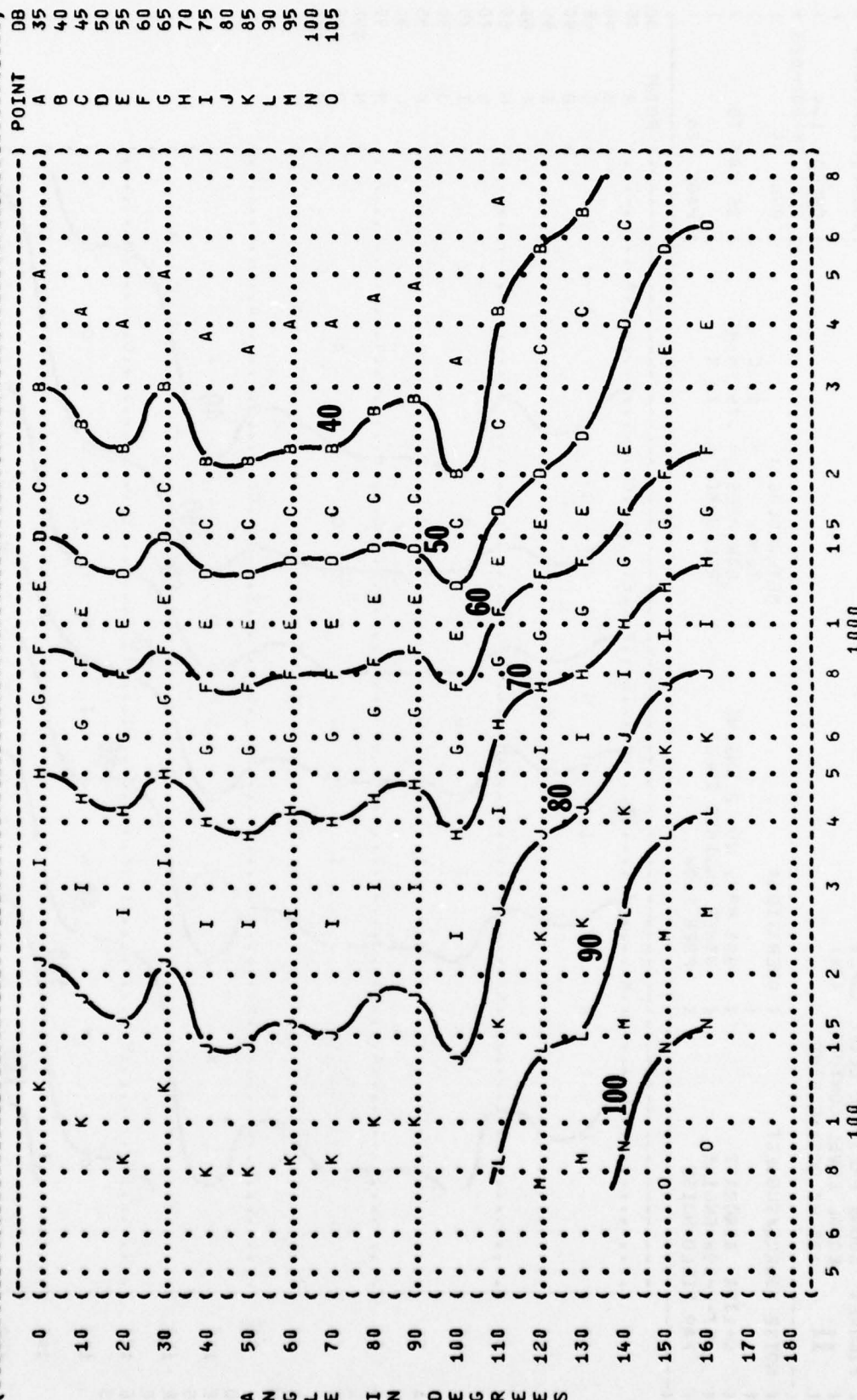




( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( 90% RPM, NO. 2 ENGINE  
 ( J57-P-59W ENGINE ( OTHER ENGINES IDLE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 04  
 ( 06 MAY 75  
 ( PAGE 18



( FIGURE: SOUND PRESSURE LEVEL (SPL) ) IDENTIFICATION: )  
 ( 11 EQUAL LEVEL CONTOURS (DB) ) )  
 ( 63 HZ OCTAVE BAND ) )  
 ( NOISE SOURCE/SUBJECT: ) )  
 ( C-135A AIRCRAFT ) )  
 ( J57-P-59W ENGINE ) )  
 ( FAR FIELD NOISE ) )  
 ( OPERATION: ) )  
 ( 90% RPM, NO. 2 ENGINE ) )  
 ( OTHER ENGINES IDLE ) )  
 ( FREE FLOW ) )  
 ( METEOROLOGY: ) )  
 ( TEMP = 15 C ) )  
 ( BAR PRESS = .760 M HG ) )  
 ( REL HUMID = 70 % ) )  
 ( 06 MAY 75 ) )  
 ( PAGE 19 ) )  
 ( TEST 75-002-023 ) )  
 ( RUN 04 ) )  
 ( OMEGA 1.4 ) )  
 ( ) )



```
(-----)
( FIGURE : SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION :
( EQUAL LEVEL CONTOURS (DB) )
( 11 ) OMEGA 1.4
( 125 HZ OCTAVE BAND ) TEST 75-002-023
( NOISE SOURCE/SUBJECT : ) RUN 04
( OPERATION : ) METEOROLOGY :
( C-135A AIRCRAFT ) TEMP = 15 C
( J57-P-59W ENGINE ) 90% RPM, NO. 2 ENGINE BAR PRESS = .760 M HG
( FAR FIELD NOISE ) OTHER ENGINES IDLE REL HUMID = 70 %
( FREE FLOW ) PAGE 20
(-----)
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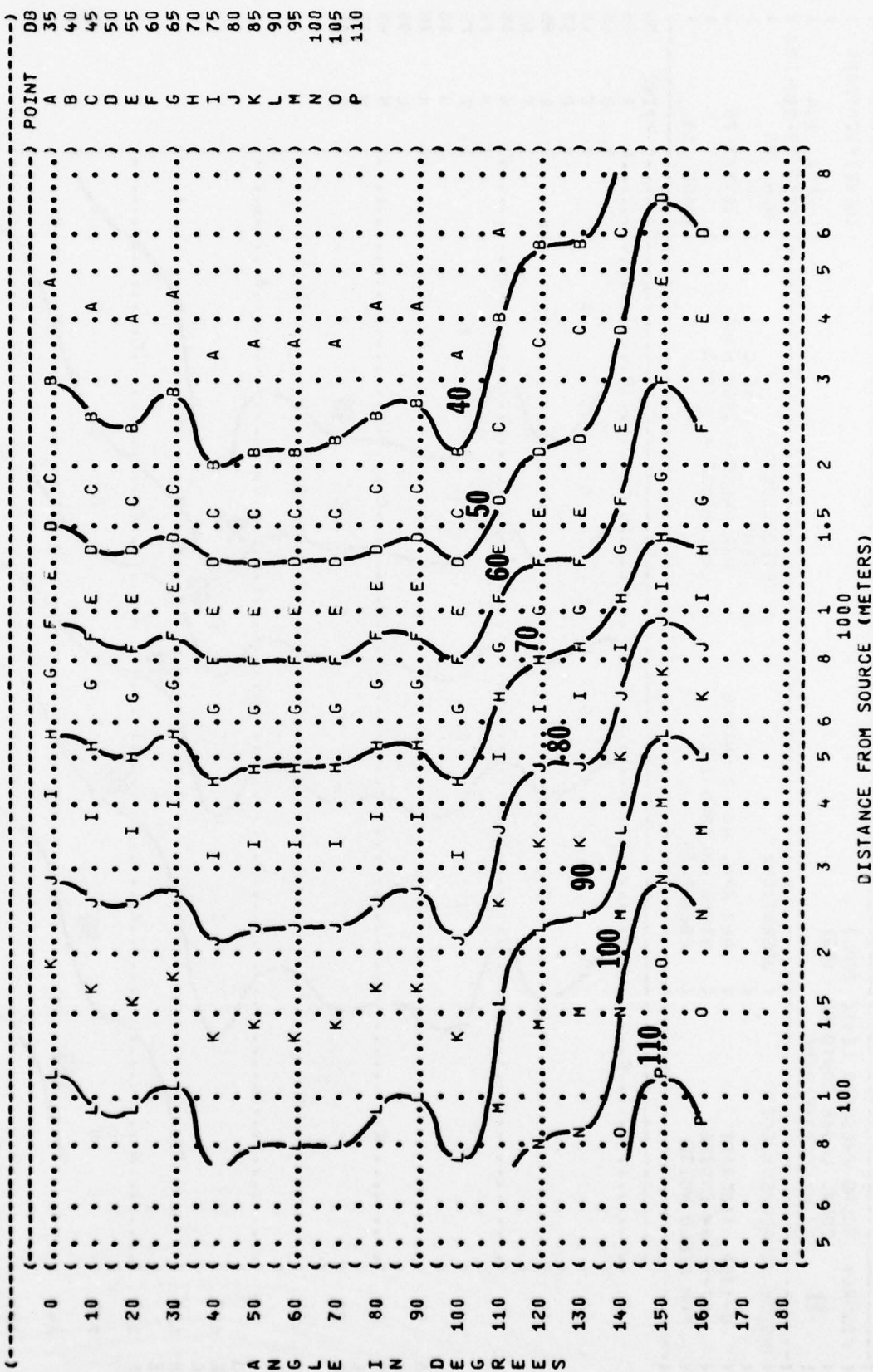


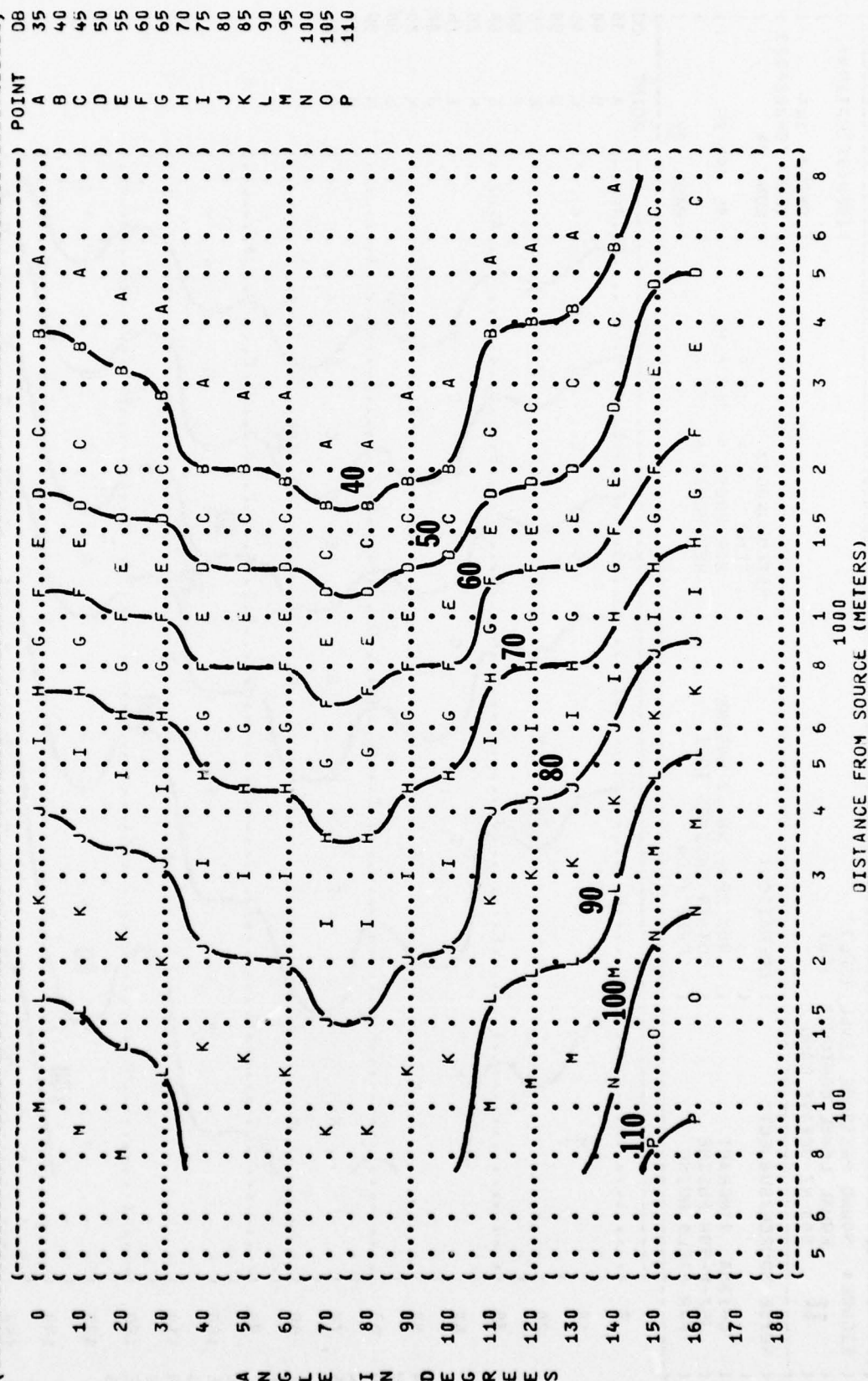


FIGURE: SOUND PRESSURE LEVEL {SPL}  
 11 EQUAL LEVEL CONTOURS (DB)  
 250 HZ OCTAVE BAND

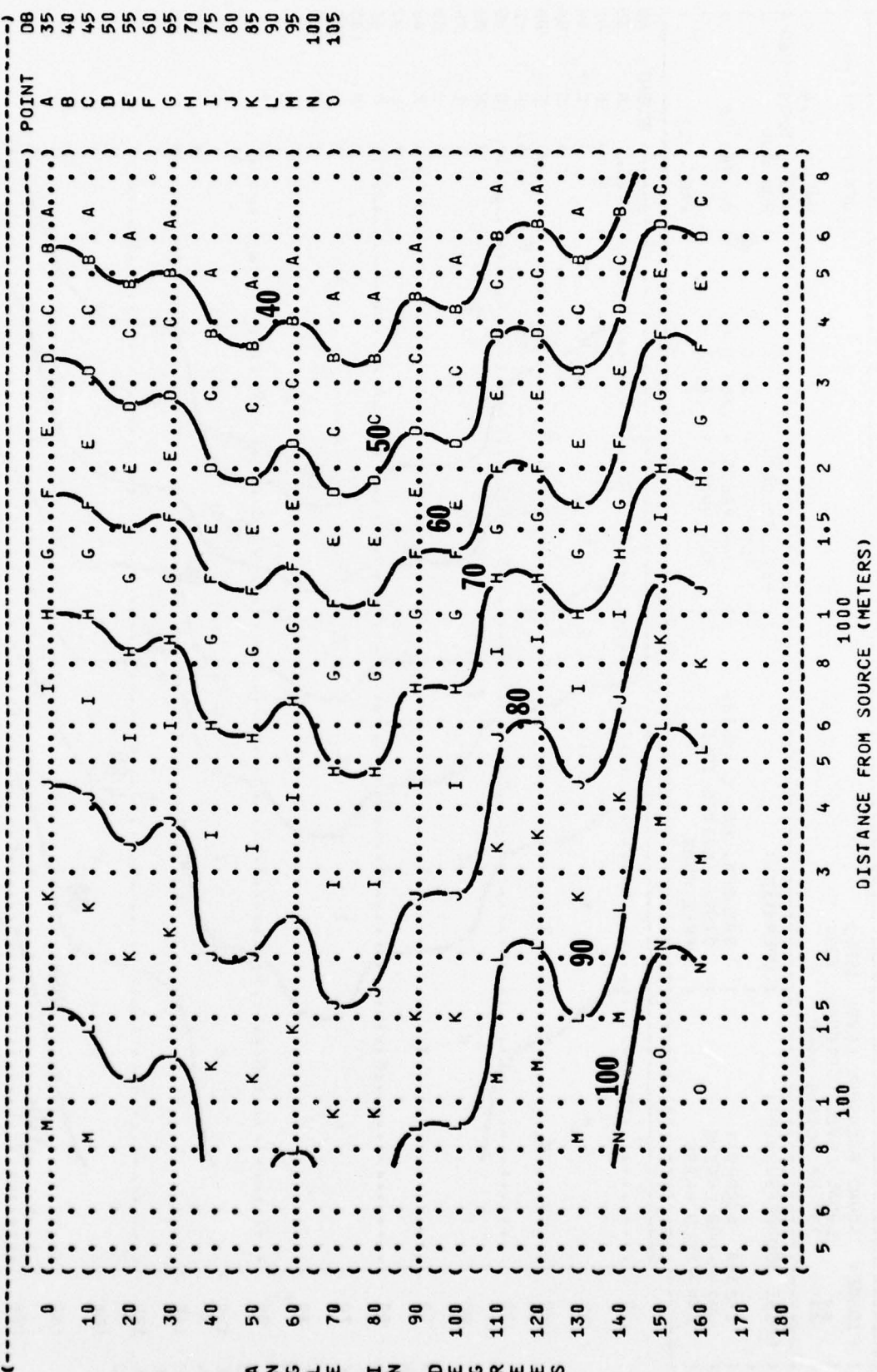
NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( ( 90% RPM, NO. 2 ENGINE ) TEMP = 15 C )  
 ( ( OTHER ENGINES IDLE ) BAR PRESS = .760 M HG )  
 ( ( FREE FLOW ) REL HUMID = 70 % )

C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE

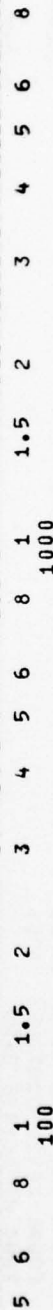
IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 04  
 06 MAY 75  
 PAGE 21



(	FIGURE:	SOUND PRESSURE LEVEL {SPL}		) IDENTIFICATION:	
(	EQUAL LEVEL CONTOURS (DB)			)	
(	11	500 HZ OCTAVE BAND		) OMEGA 1.4	
(				) TEST 75-002-023	
(	NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:	) RUN 04	
(		(	TEMP = 15 C	)	
(	C-135A AIRCRAFT	(	90% RPM, NO. 2 ENGINE	) BAR PRESS = .760 M HG	
(	J57-P-59W ENGINE	(	OTHER ENGINES IDLE	) REL HUMID = 70 %	
(	FAR FIELD NOISE	(	FREE FLOW	) PAGE 22	



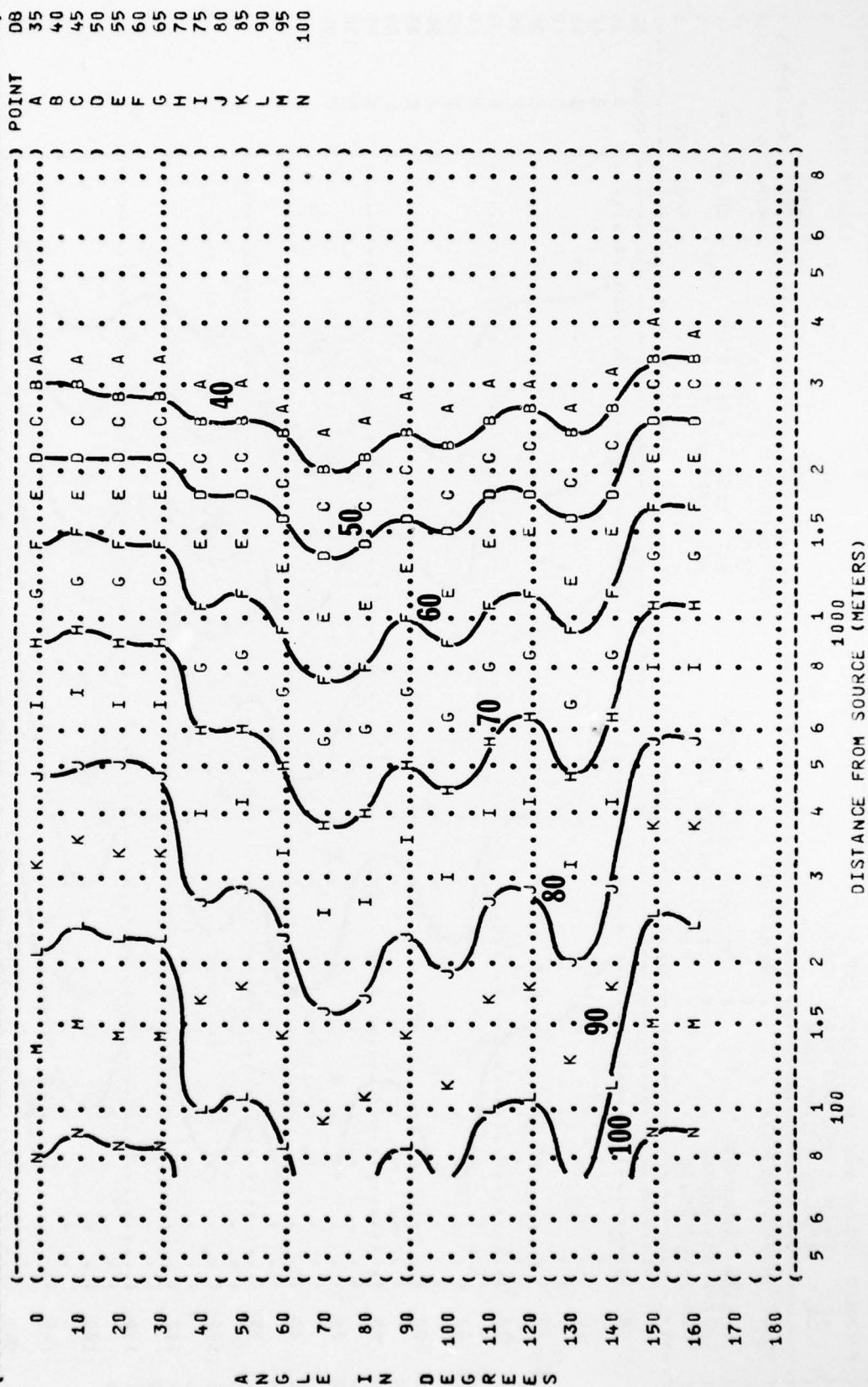
PAGE 23



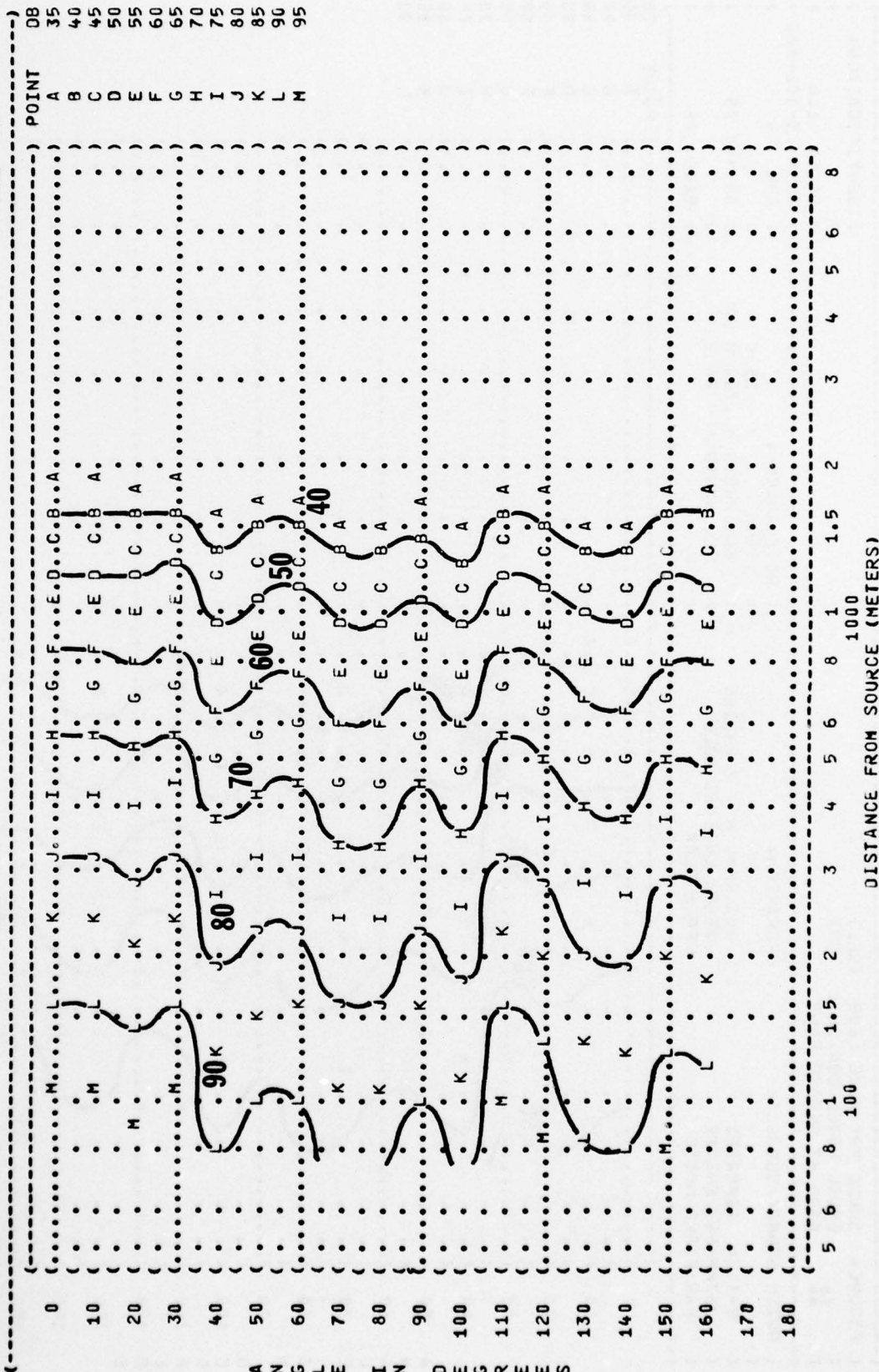
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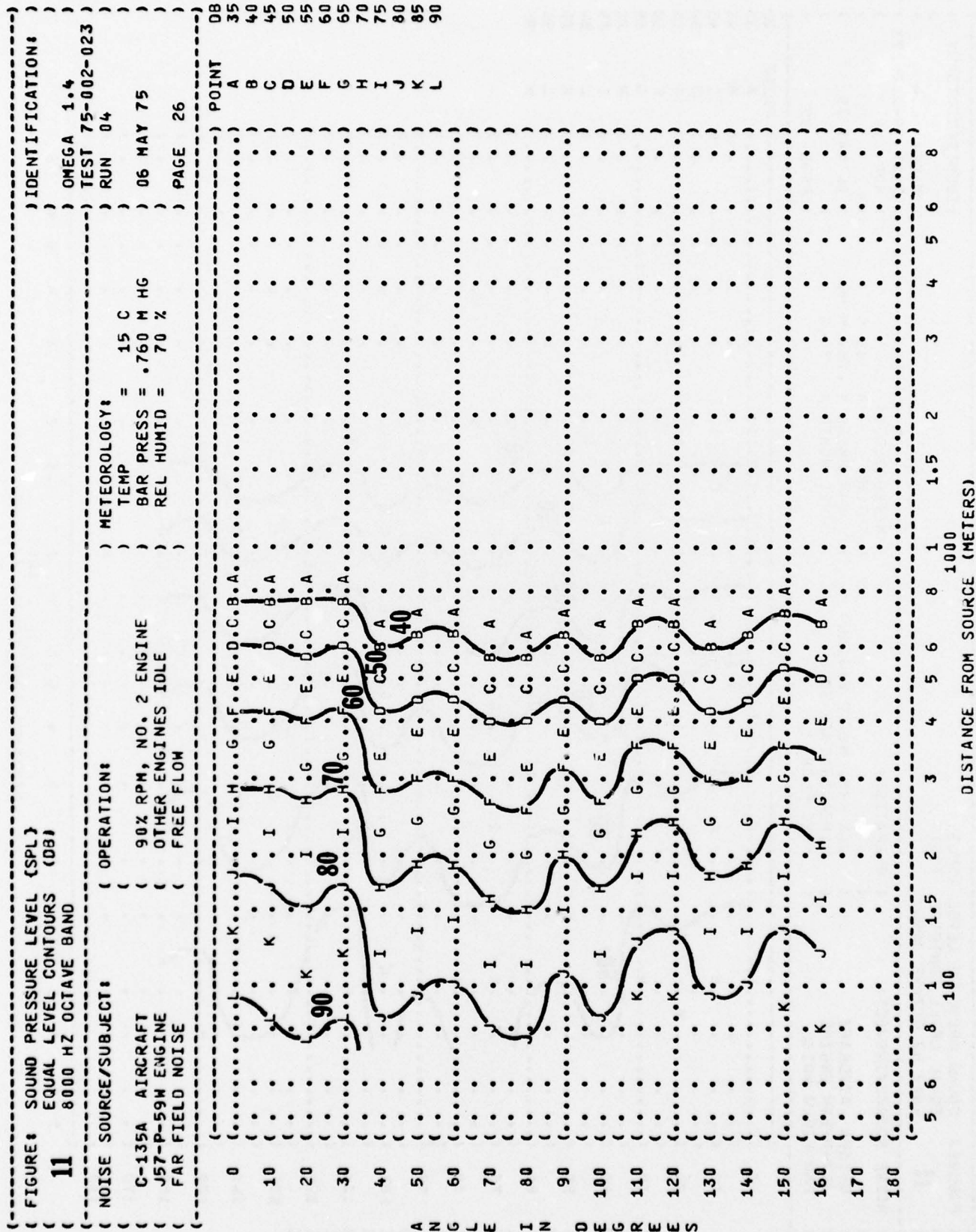


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(-----)
( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( EQUAL LEVEL CONTOURS (DB) ) )
( 11 ) OMEGA 1.4 )
( 2000 HZ OCTAVE BAND ) TEST 75-002-023 )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY: ) RUN 04 )
( ) TEMP = 15 C ) )
( C-135A AIRCRAFT ) 90% RPM, NO. 2 ENGINE ) BAR PRESS = .760 M HG )
( J57-P-59W ENGINE ) OTHER ENGINES IDLE ) REL HUMID = 70 % )
( FAR FIELD NOISE ) FREE FLOW ) PAGE 24 )
(-----)
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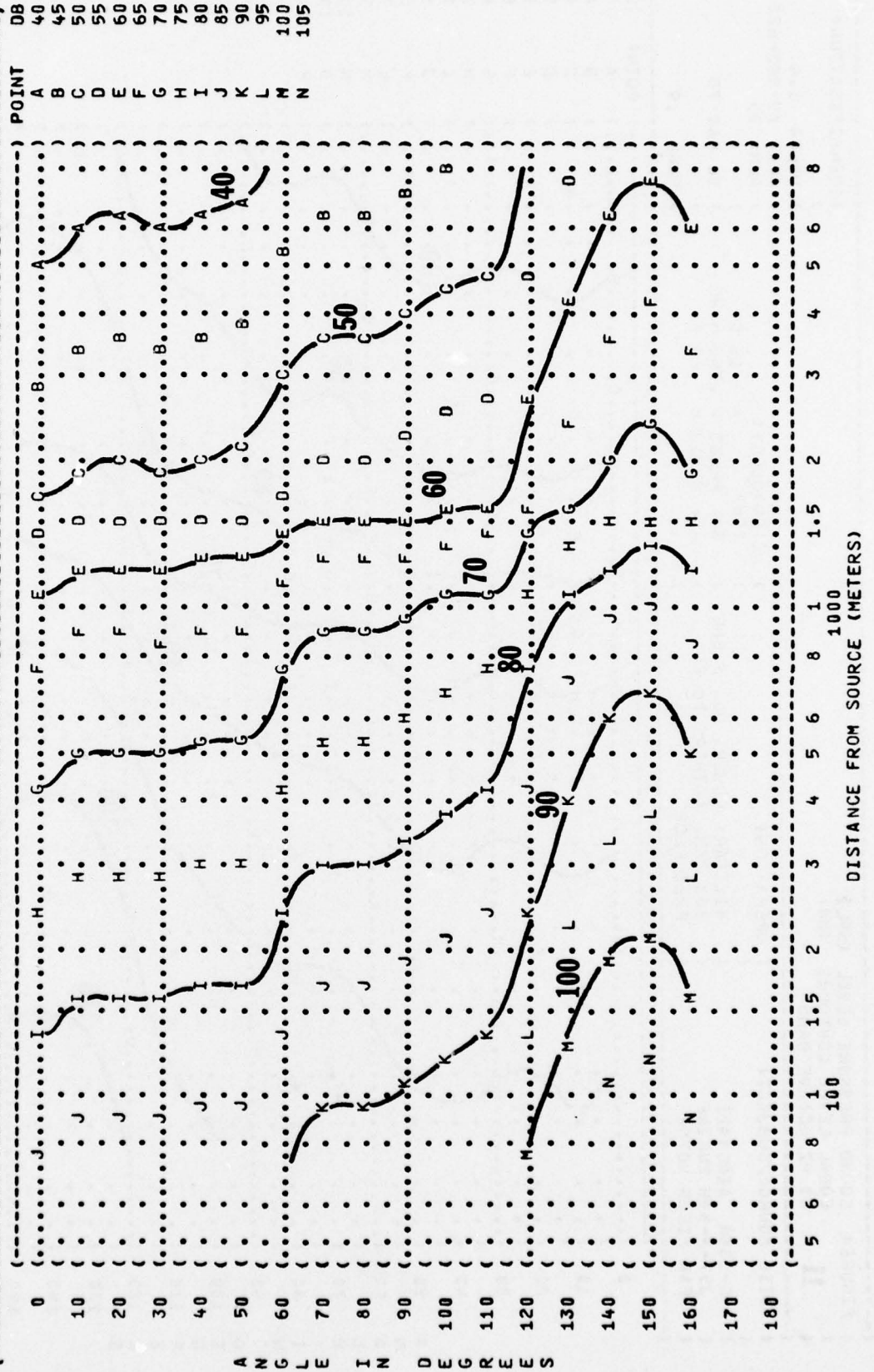
( FIGURE: SOUND PRESSURE LEVEL {SPL}  
( EQUAL LEVEL CONTOURS (DB)  
( 4000 HZ OCTAVE BAND  
**11**  
( NOISE SOURCE/SUBJECT: ) OPERATION:  
( C-135A AIRCRAFT ) 90% RPM, NO. 2 ENGINE  
( J57-P-59W ENGINE ) OTHER ENGINES IDLE  
( FAR FIELD NOISE ) FREE FLOW  
) METEOROLOGY:  
) TEMP = 15 C  
) BAR PRESS = .760 M HG  
) REL HUMID = 70 %  
) OMEGA 1.4  
) TEST 75-002-023  
) RUN 04  
) IDENTIFICATION:



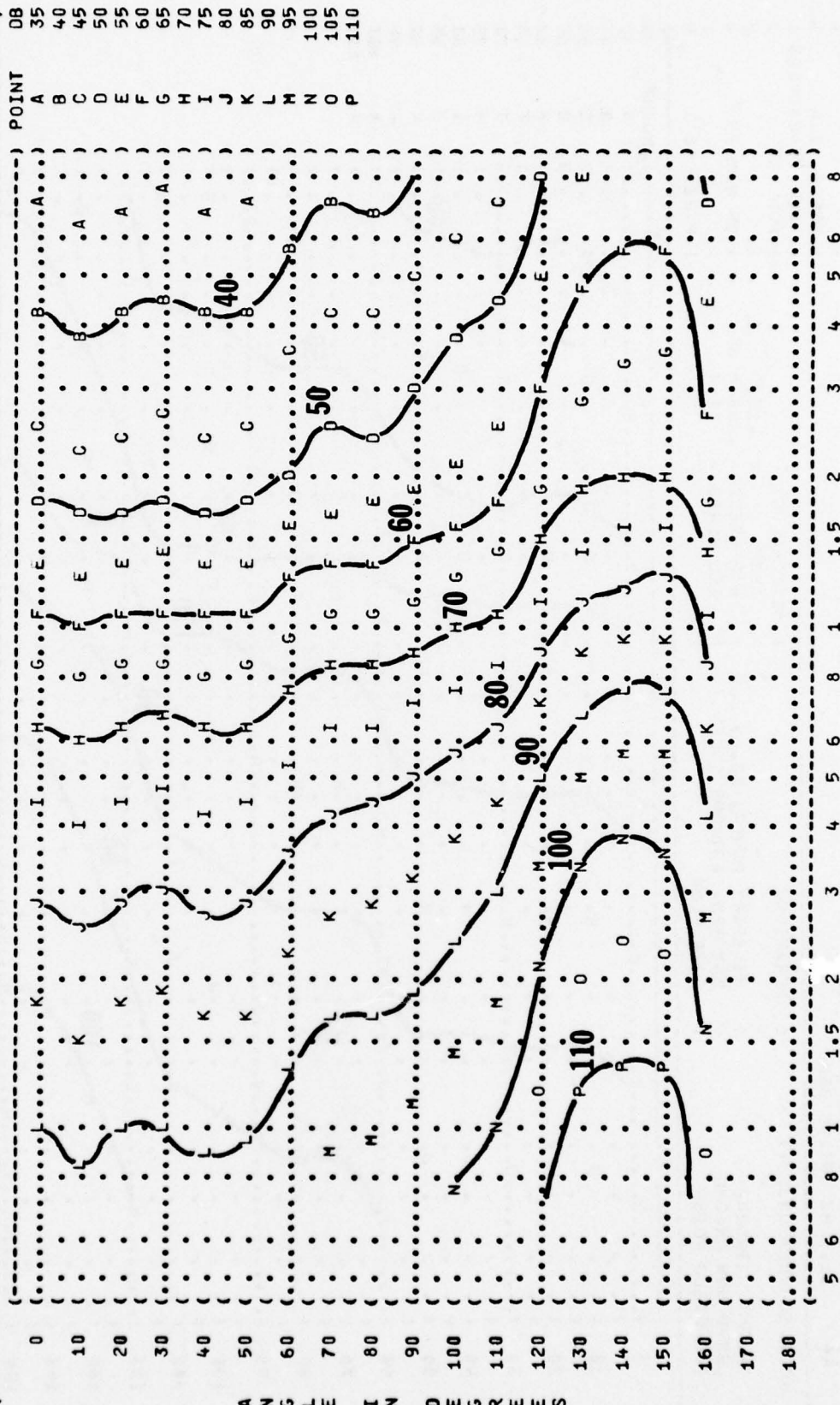




( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( C-135A AIRCRAFT  
 ( ( J57-P-59W ENGINE  
 ( ( FAR FIELD NOISE  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( MILITARY POWER, NO. 3 ENG  
 ( ( 96% RPM, (OTHERS IDLE)  
 ( ( FREE FLOW  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( RUN 05  
 ( ( 06 MAY 75  
 ( ( PAGE 18  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 (



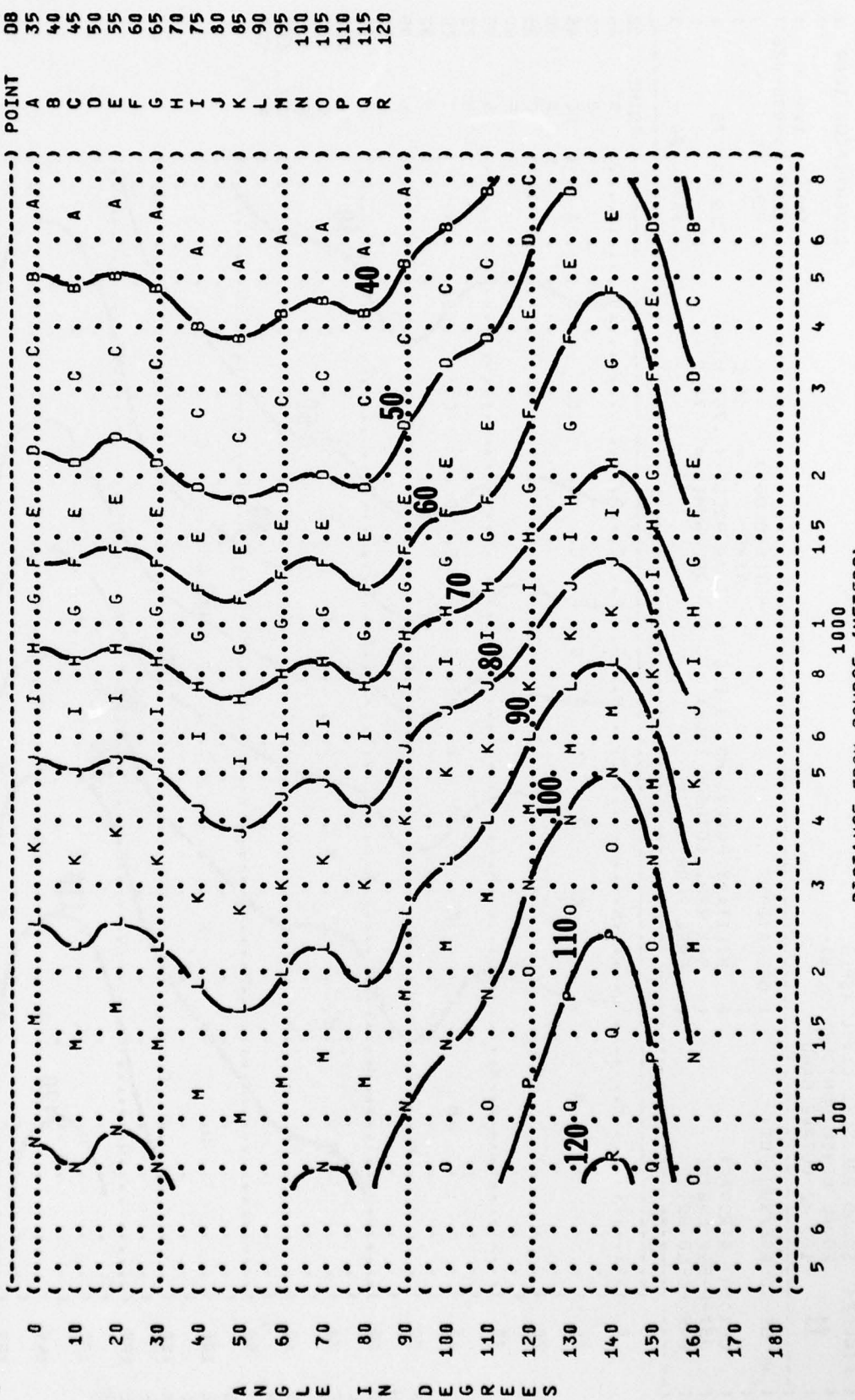
( FIGURE: SOUND PRESSURE LEVEL {SPL} )  
 ( EQUAL LEVEL CONTOURS (DB) )  
 ( 63 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( MILITARY POWER, NO. 3 ENG )  
 ( 96% RPM, (OTHERS IDLE) )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 05 )  
 ( 06 MAY 75 )  
 ( PAGE 19 )





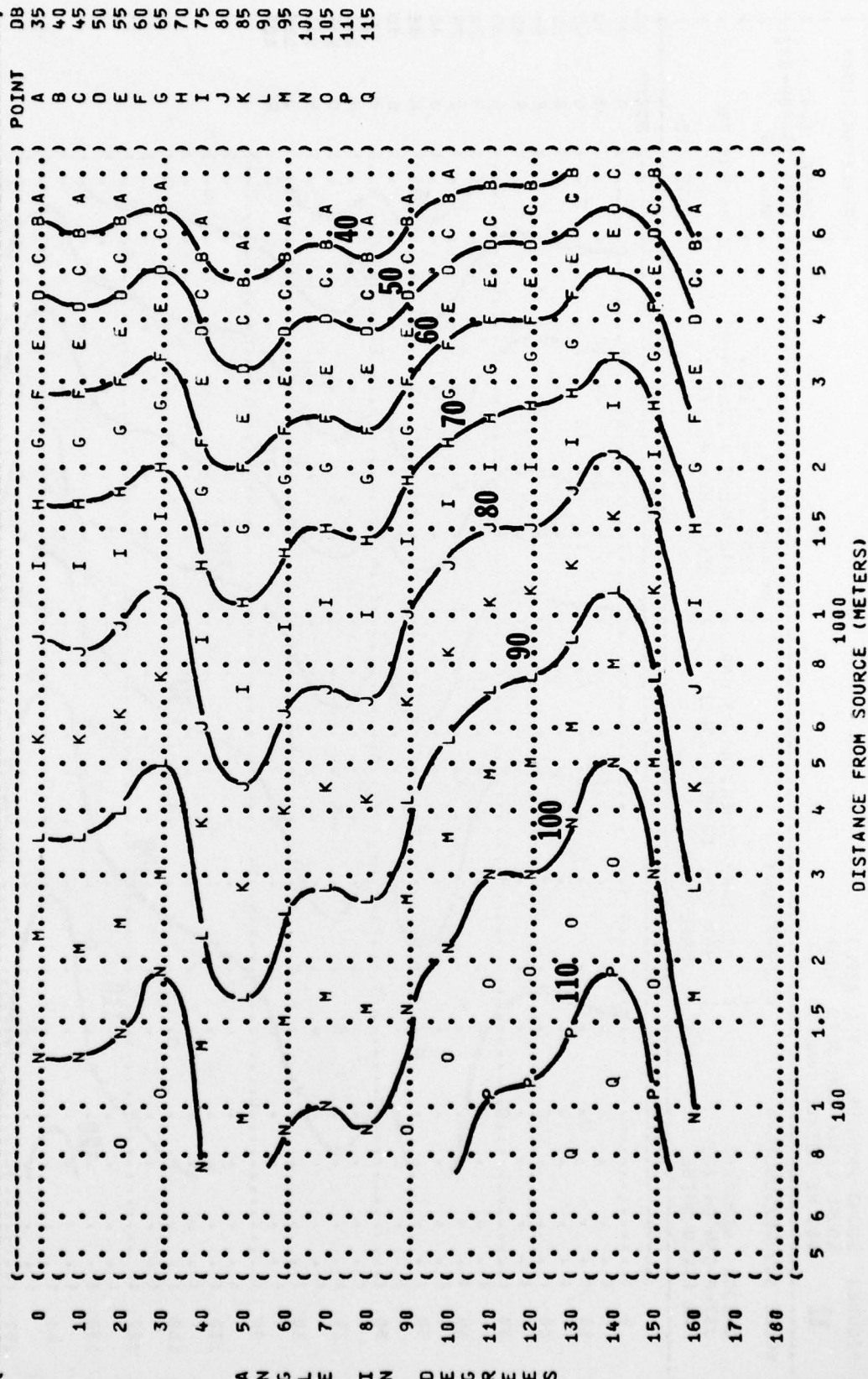


( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( EQUAL LEVEL CONTOURS (DB) )  
 ( 11 250 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( MILITARY POWER, NO. 3 ENG )  
 ( 96% RPM, (OTHERS IDLE) )  
 ( FREE FLOW )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 05 )  
 ( 06 MAY 75 )  
 ( PAGE 21 )



;

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(-----)
( ) FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( ) EQUAL LEVEL CONTOURS (DB) ) )
( ) 11 ) OMEGA 1.4 )
( ) 1000 HZ OCTAVE BAND ) TEST 75-002-023 )
( ) NOISE SOURCE/SUBJECT: ) RUN 05 )
( ) ) METEOROLOGY: )
( ) ) TEMP = 15 C )
( ) ) BAR PRESS = .760 M HG )
( ) ) MILITARY POWER, NO. 3 ENG ) 06 MAY 75 )
( ) ) 96% RPM, (OTHERS IDLE) ) )
( ) ) FREE FLOW ) PAGE 23 )
(-----)
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( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( MILITARY POWER, NO. 3 ENG  
 ( J57-P-59W ENGINE ( 96% RPM, (OTHERS IDLE)  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( RUN 05  
 ( TEST 75-002-023  
 ( OMEGA 1.4  
 ( IDENTIFICATION:  
 ( PAGE 24

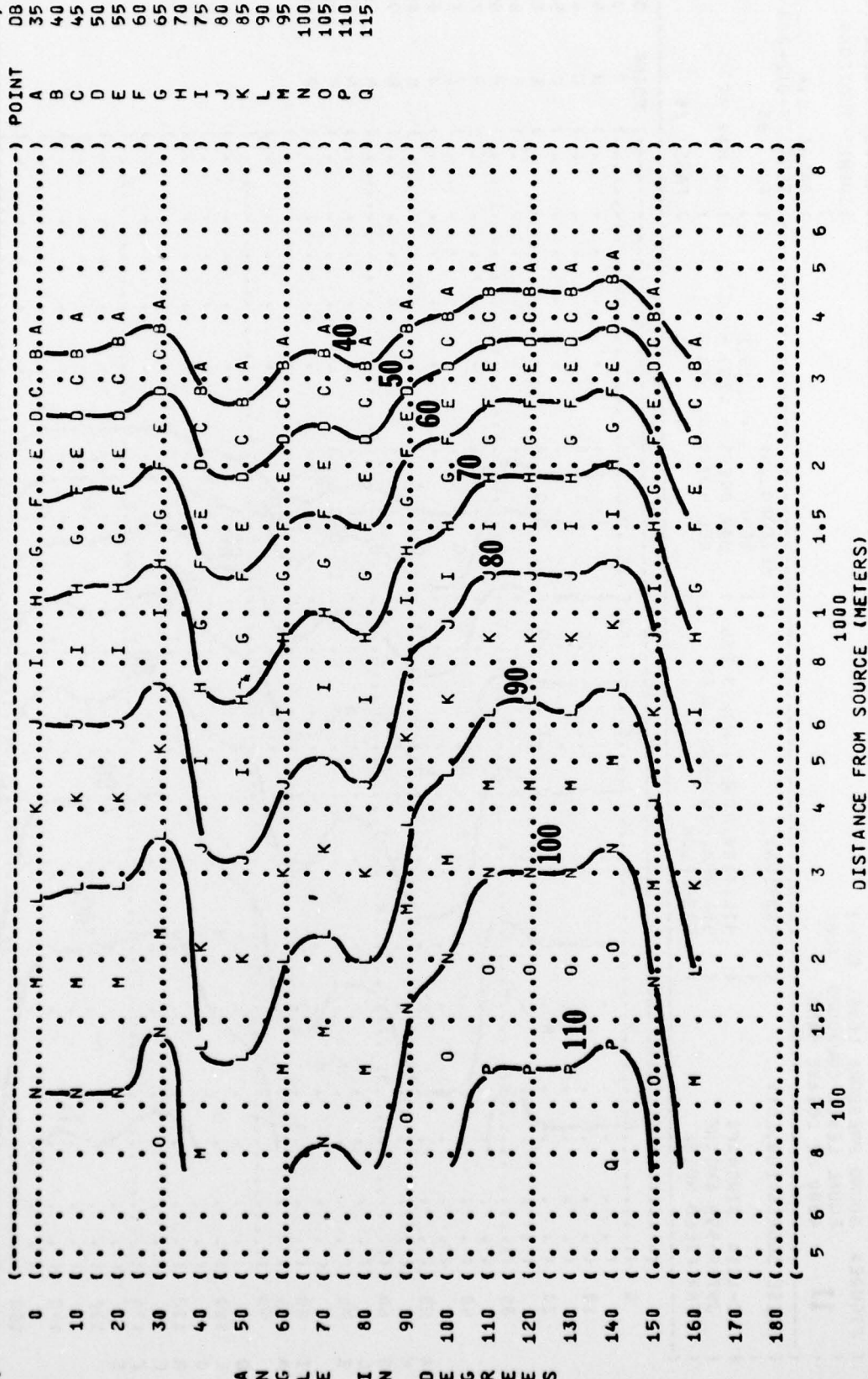






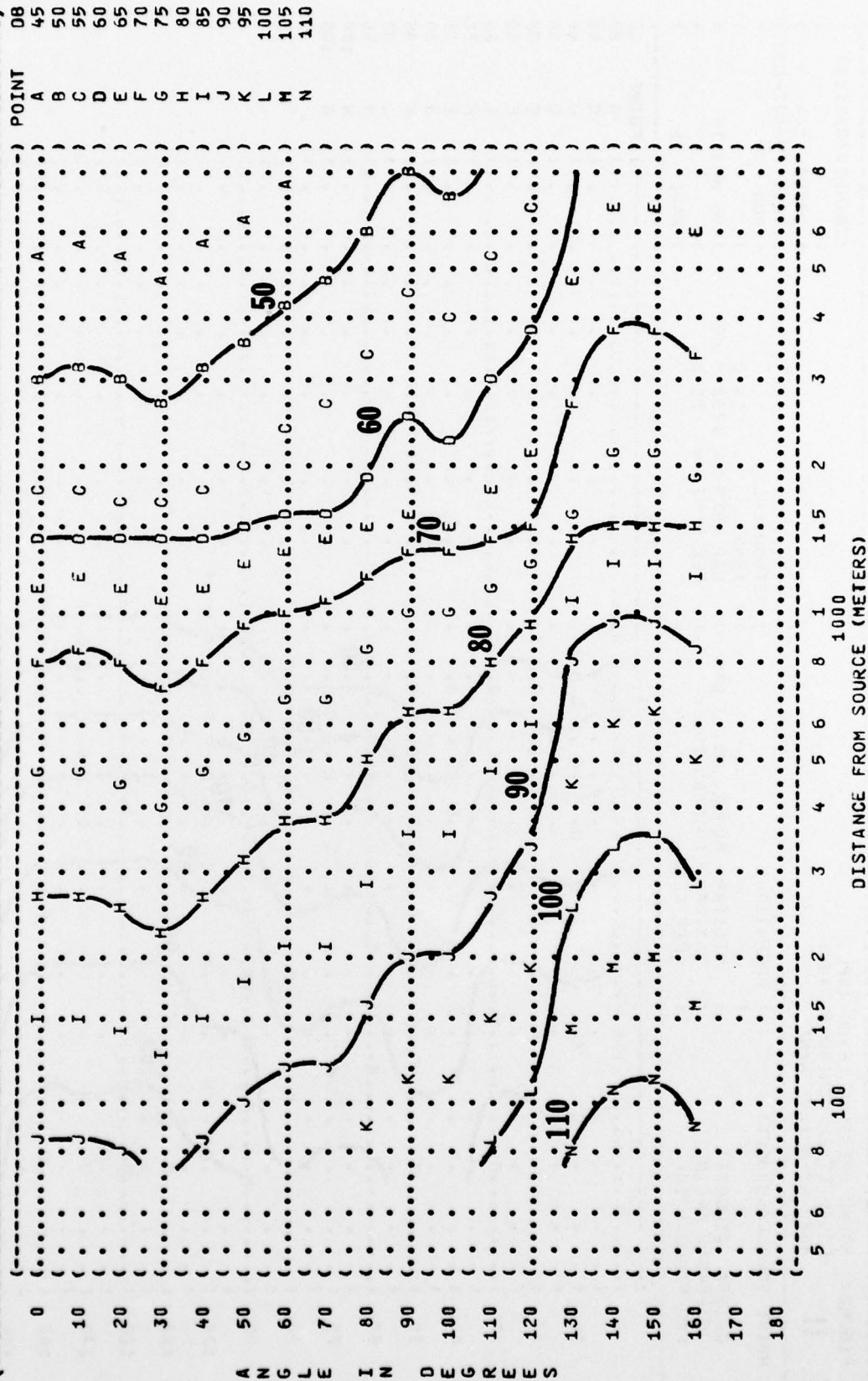


FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 31.5 HZ OCTAVE BAND

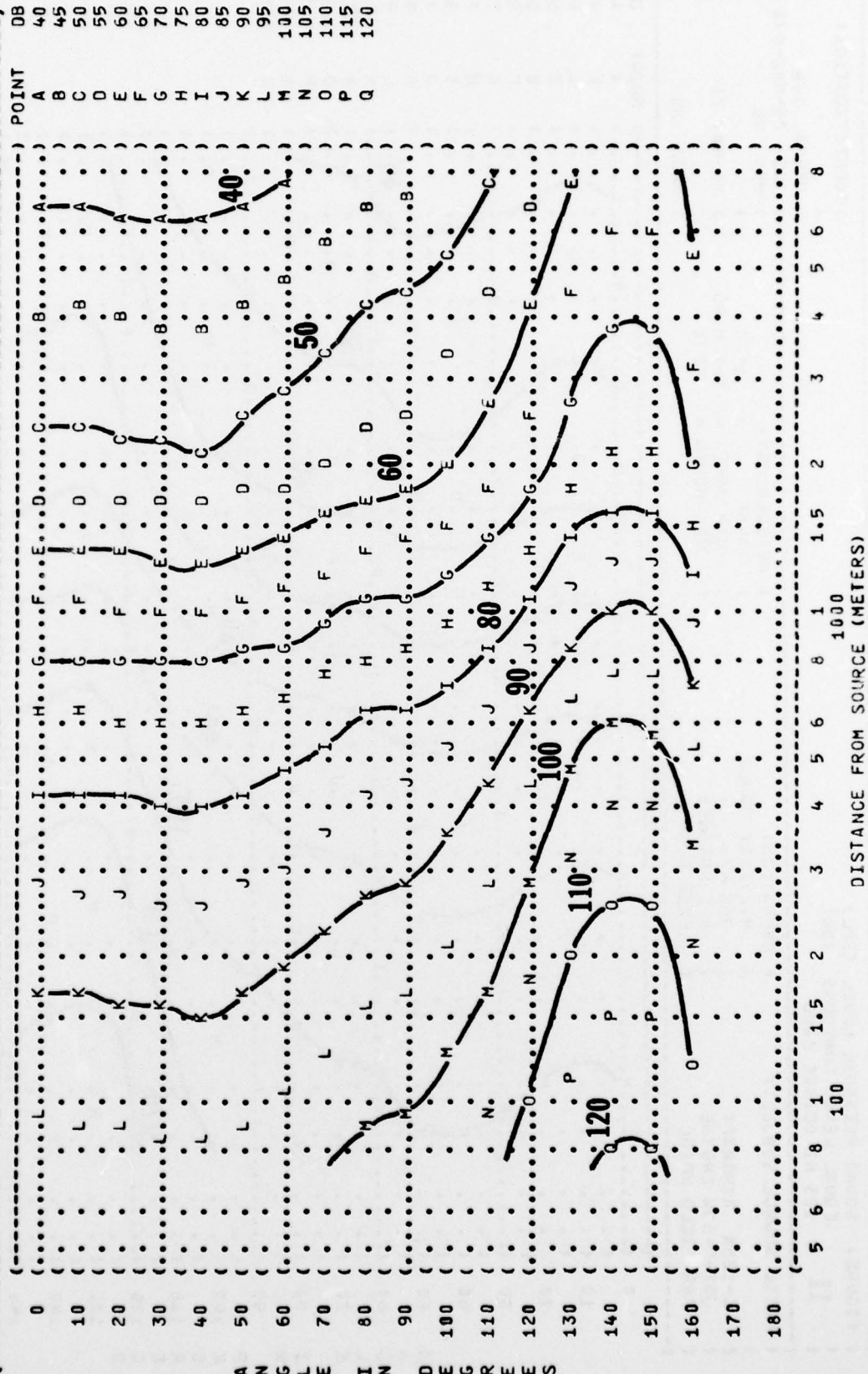
NOISE SOURCE/SUBJECT: ( ) IDENTIFICATION: ( )  
 ( ) ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-023  
 ( ) RUN 06

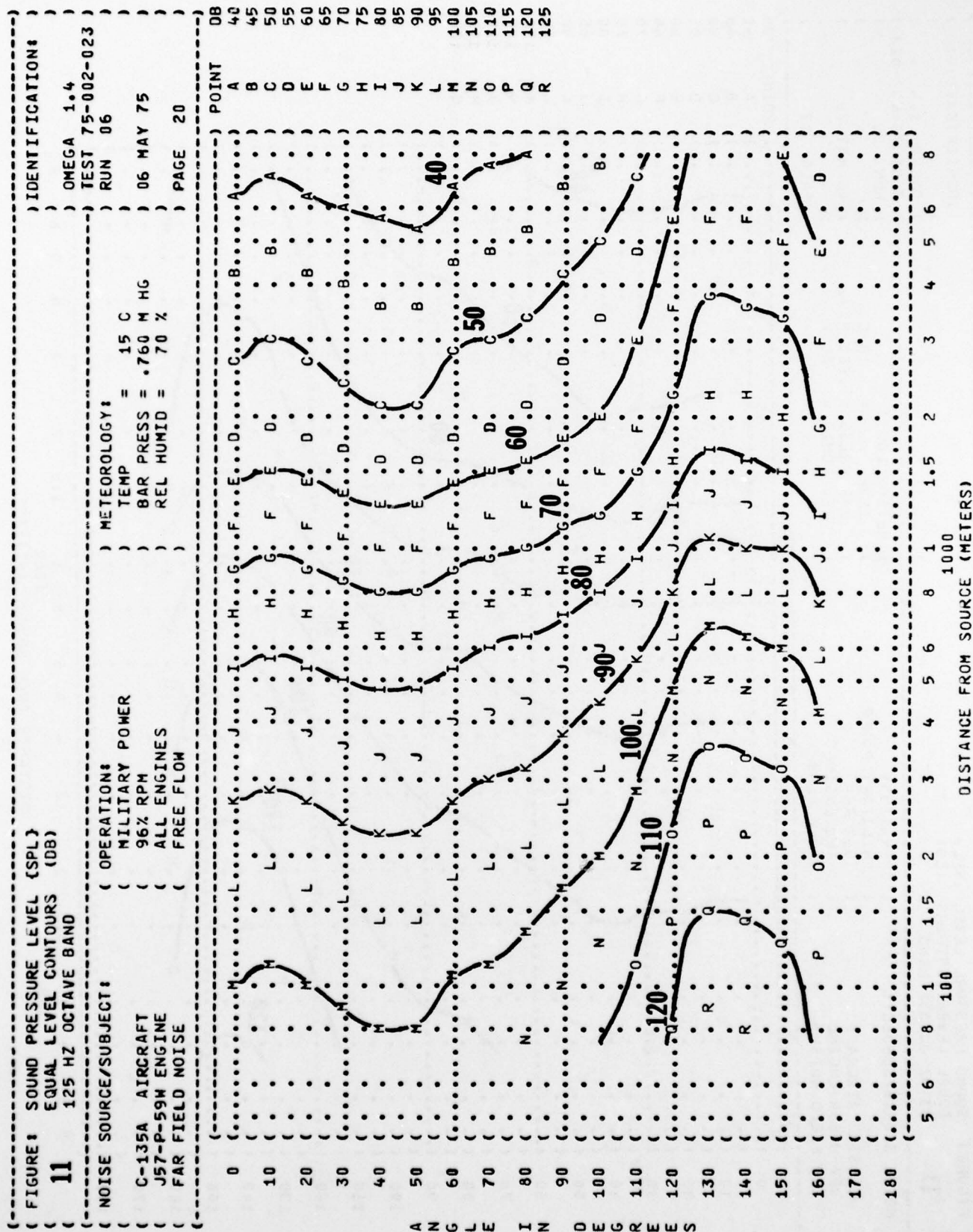
OPERATION: ( ) METEOROLOGY: ( )  
 ( ) MILITARY POWER ( ) TEMP = 15 C  
 ( ) 96% RPM ( ) BAR PRESS = .760 M HG  
 ( ) ALL ENGINES ( ) REL HUMID = 70 %  
 ( ) FREE FLOW ( ) PAGE 18

C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE



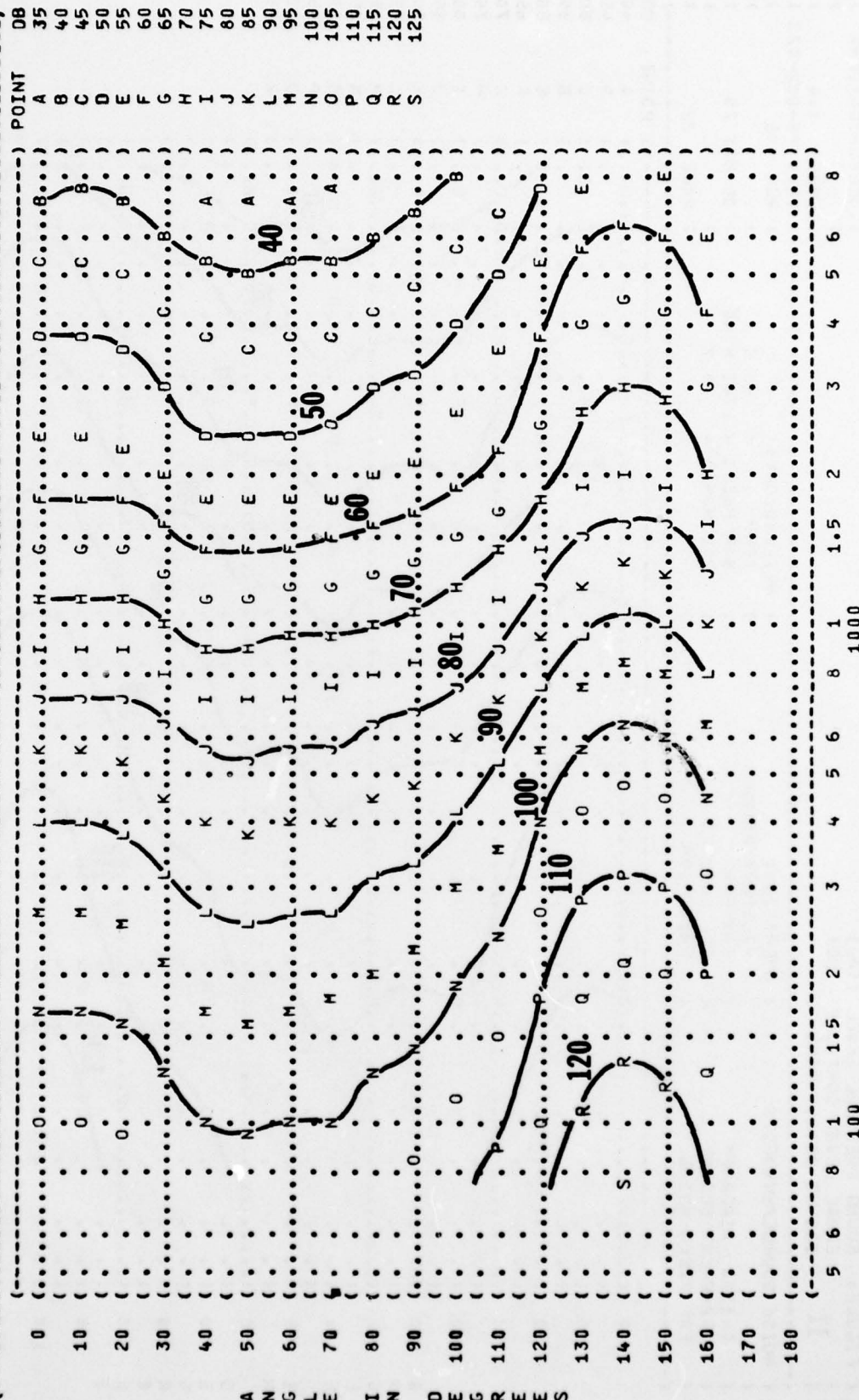
( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( MILITARY POWER  
 ( ( 96% RPM  
 ( ( ALL ENGINES  
 ( ( FREE FLOW  
 ( C-135A AIRCRAFT  
 ( J57-P-59W ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 06  
 ( 06 MAY 75  
 ( PAGE 19







( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( **11** 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( MILITARY POWER  
 ( C-135A AIRCRAFT ( 96% RPM  
 ( J57-P-59W ENGINE ( ALL ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 06  
 ( 06 MAY 75  
 ( PAGE 21



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ( METEOROLOGY:  
 ( C-135A AIRCRAFT ( MILITARY POWER ( TEMP = 15 C  
 ( J57-P-59W ENGINE ( 96% RPM ( BAR PRESS = .760 M HG  
 ( FAR FIELD NOISE ( ALL ENGINES ( REL HUMID = 70 %  
 ( ( FREE FLOW ( ( PAGE 22  
 ( IDENTIFICATION: ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 06

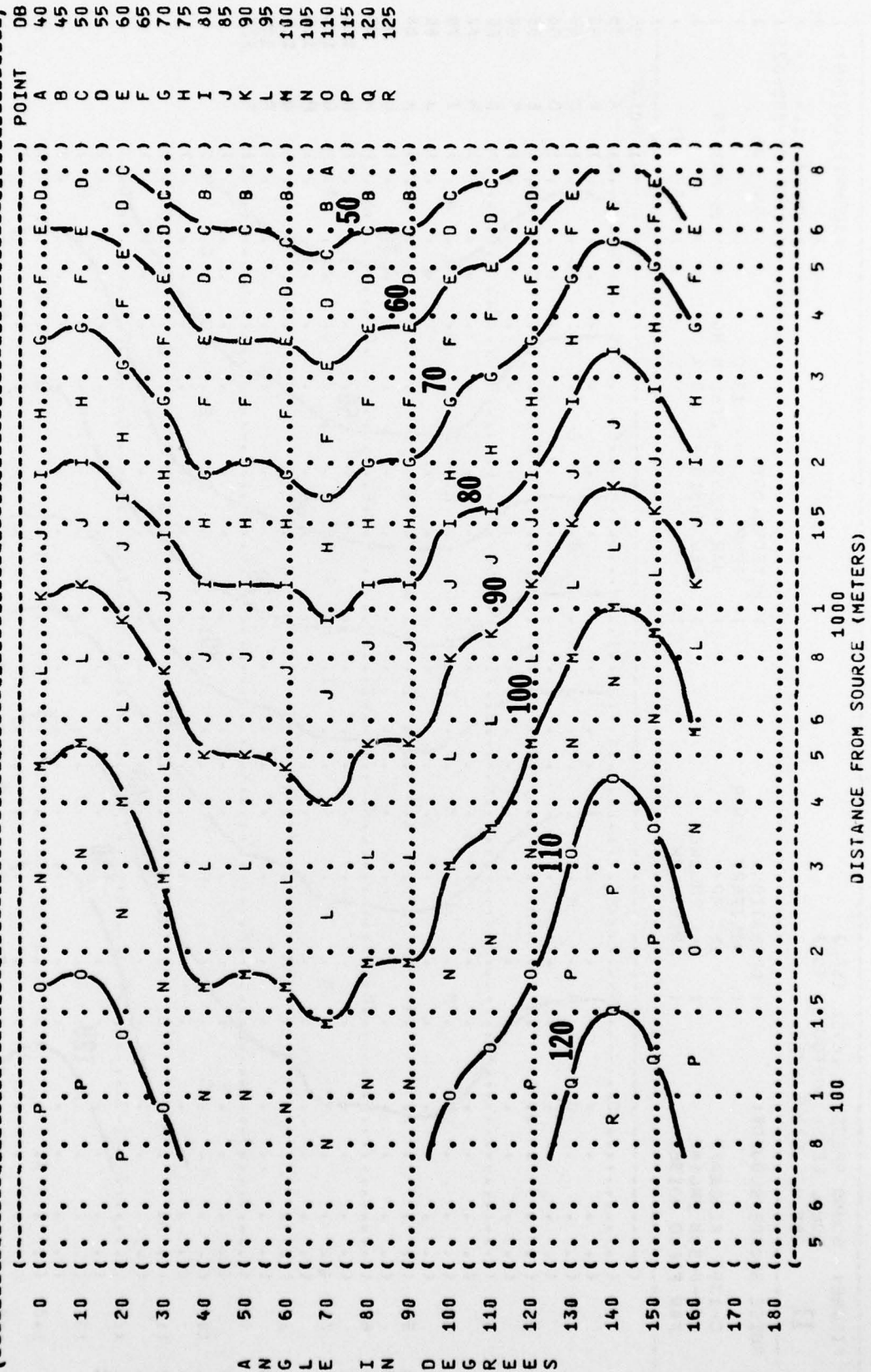


FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 1000 HZ OCTAVE BAND

11

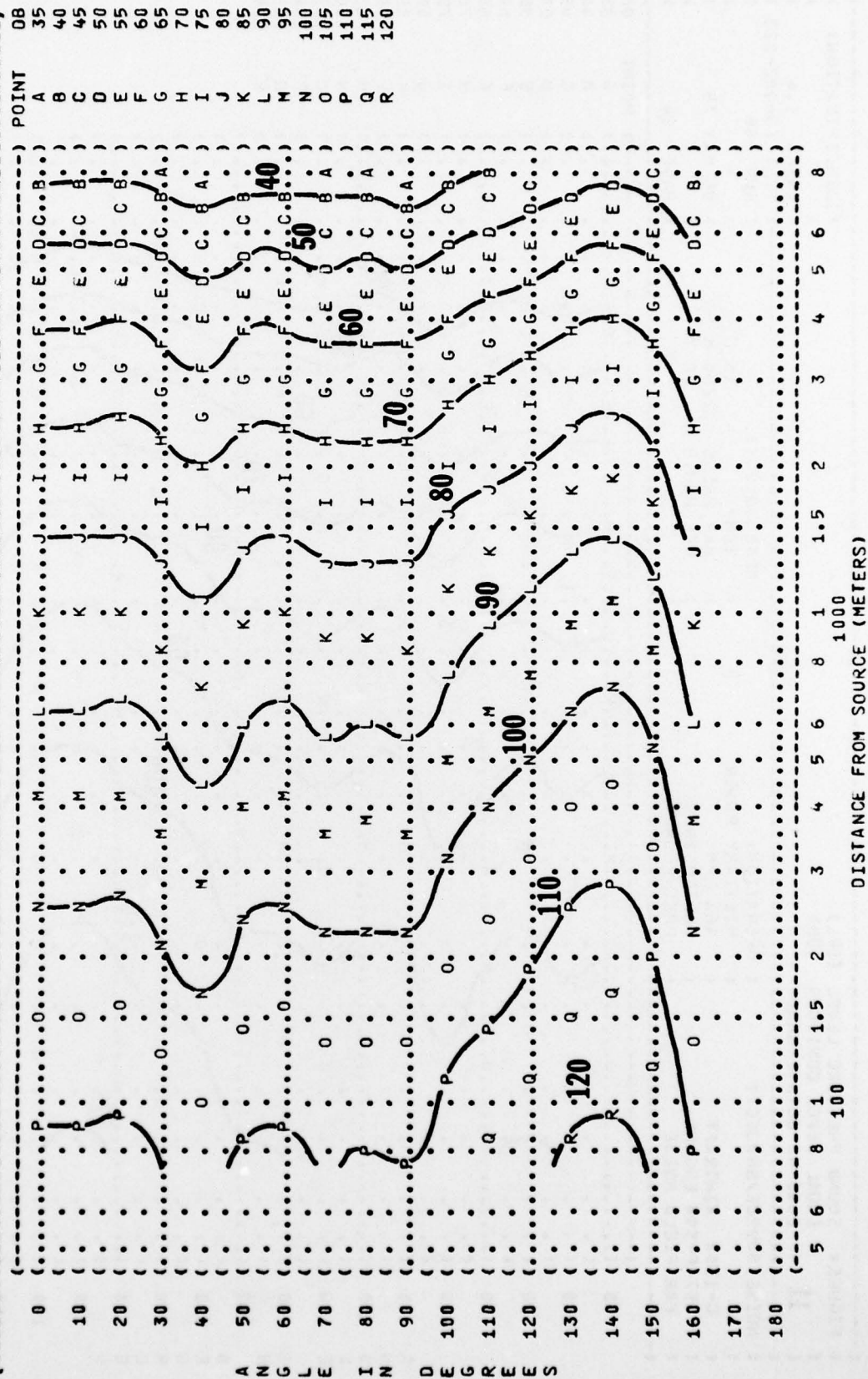
IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-023  
 RUN 06

NOISE SOURCE/SUBJECT:  
 C-135A AIRCRAFT  
 J57-P-59W ENGINE  
 FAR FIELD NOISE

OPERATION:  
 MILITARY POWER  
 96% RPM  
 ALL ENGINES  
 FREE FLOW

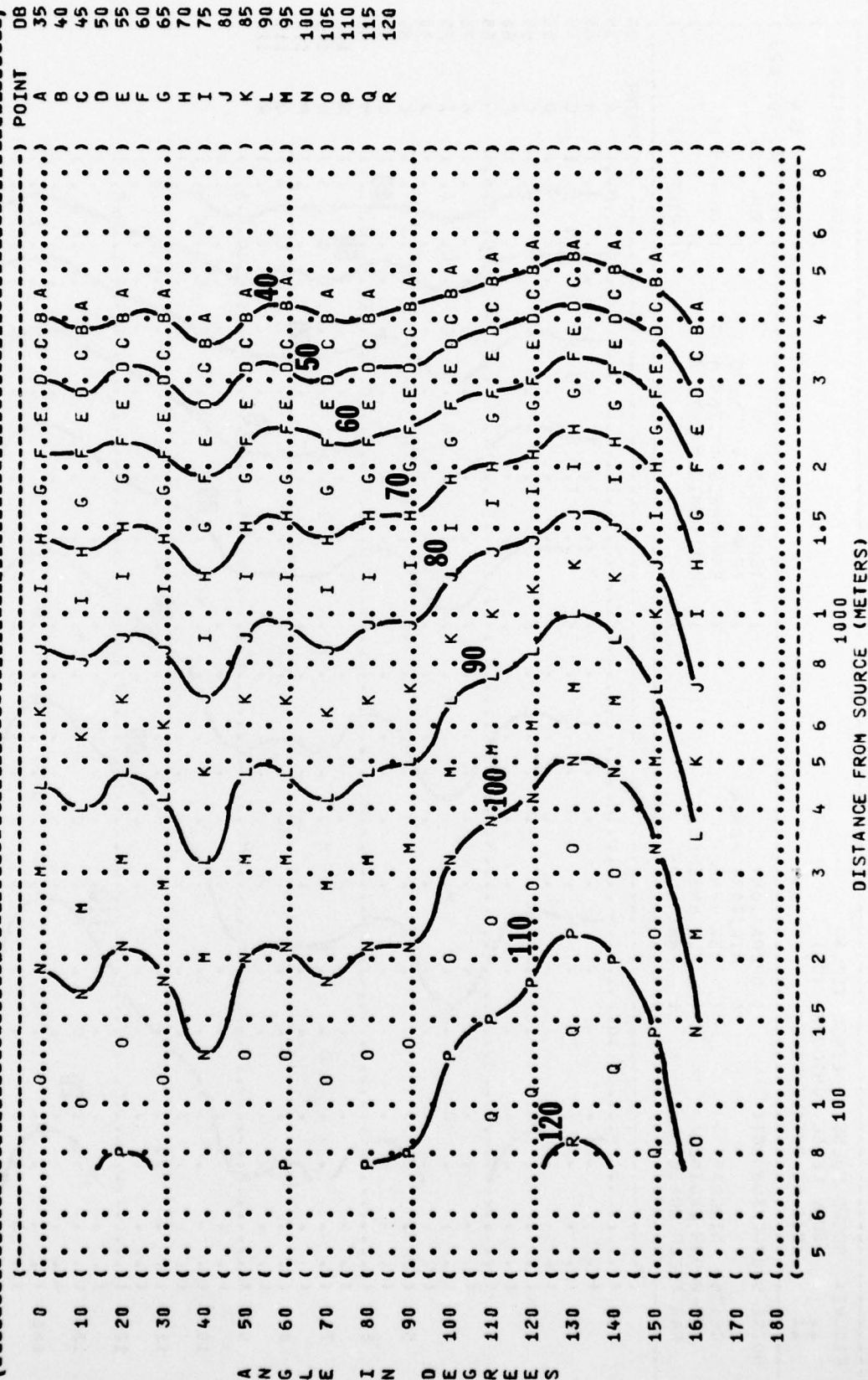
METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

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( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( EQUAL LEVEL CONTOURS (DB) )  
 ( 11 2000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( C-135A AIRCRAFT )  
 ( J57-P-59W ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( MILITARY POWER )  
 ( 96% RPM )  
 ( ALL ENGINES )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-023 )  
 ( RUN 06 )  
 ( 06 MAY 75 )  
 ( PAGE 24 )



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( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( C-135A AIRCRAFT ( MILITARY POWER  
 ( J57-P-59W ENGINE ( 96% RPM  
 ( FAR FIELD NOISE ( ALL ENGINES  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-023  
 ( RUN 06  
 ( 06 MAY 75  
 ( PAGE 26

